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ABSTRACT

The 1976-77 fiscal year activity for the Futuring of Business Education Curricular Needs Project involved the creation of the Statewide Business Education Review Committee. The committee conducted a conference--New York's first Statewide Business Review Conference--focusing on the projected needs of the business community in the next twenty years, and on appropriate recommendations to serve as a basis for changes or new developments in the business education curriculum/program (primarily at the secondary level) which would be compatible with the changing needs of business. Following a brief introduction covering the committee's participants and activities, eight papers given at the Statewide Business Review Conference are presented in this report. Representative titles are "Business and the Future: A View of the Possible," "The Future Environment for Business, Education, Work, and Leisure," and "In Search of New Direction." Names and addresses of members of the Statewide Business Review Committee of New York are appended. (BL)

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ED149020

STATEWIDE BUSINESS EDUCATION EVALUATION COMMITTEE

U.S. DEPARTMENT OF HEALTH,
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NATIONAL INSTITUTE OF
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FOREWORD

The Institute for Research and Development in Occupational Education (IRDOE) has a continuing concern for the impact that changes in technology have on education in general, and on business and occupational education in particular. This concern is evident in the role IRDOE has taken in the conceptualization and implementation of interactive television for instructional uses, and in the activities of IRDOE in the areas of computer assistance for guidance and counseling. It was, therefore, natural that IRDOE should undertake to assist the State Education Department in the conduct of a project intended to assess what impact changes in technology and automation in the business area is likely to have on business education.

It was an act of educational statesmanship for the State Education Department to undertake such a study. All too often educators have been criticized for teaching skills that are no longer needed by students, and for failure to anticipate the needs of the future. Clearly, the present project is one of many illustrations that such criticism is unfounded. The successful completion of this project will do much to put New York State in the forefront of the movement in business education to make curricular offerings relevant to the business needs to today and tomorrow.

The role of IRDOE in this project has been to assist in the administration and organization by facilitating the conferences and meetings held by the Statewide Business Education Review Committee and arranging to evaluate and disseminate the results of Committee meetings. Much has been learned by IRDOE staff in the conduct of this project, and it is hoped that the business education community, in general, will profit from the activities undertaken. Interested members of the business and business education community who share the concerns addressed in this document are invited to exchange information regarding the various issues addressed in this report.

Lee Cohen, Ph.D.
Director, IRDOE

ACKNOWLEDGMENTS

The role of the Institute for Research and Development in Occupational Education (IRDOE) in this project was to organize, evaluate, and disseminate the results of the conferences held in conjunction with the Statewide Business Education Review Committee. In organizing conferences and inviting speakers the help of a great many people is needed. We have been particularly fortunate in receiving the assistance of colleagues both from the City University of New York and from many other institutions inthe Greater New York Metropolitan Area. The list of people who contributed ideas, recommendations, and suggestions is very long indeed. Rather than list these by name, and risk accidentally omitting someone who also contributed, I would hereby like to thank all of them for their help in organizing these conferences.

This project also enjoyed the active support of many individuals in the New York State Education Department. Dr. Robert S. Seckendorf, Assistant Commissioner for Occupational and Continuing Education, was directly involved in the initial conceptualization of this project, gave it his continuing encouragement, and addressed the Committee at its initial meeting in Albany, on May 19th. Dr. Douglas T. Admanson, Director, Division of Occupational Education Instruction, has supported this project from its inception. Dr. Hobart H. Conover, Chief, Bureau of Business Education also actively supported this project in all phases, and presented the charge to the Committee at the Albany meeting. The project also profited from the support and suggestions of Dr. Alan Robertson, Chief, and Dr. Theresa Mack, Associate, in the Bureau of Occupational Education Research. We hereby thank them all for their support.

Organizing the conferences required close articulation with the Chairman of the Statewide Business Education Review Committee, Dr. Willard R. Daggett. I would hereby like to acknowledge Dr. Daggett's help in all areas ranging from assisting with the selection of the physical facilities, to making suggestions regarding speakers. Without his continuous support the organization of the meetings would have been an almost impossible task.

Sigmund Tobias
Project Director

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INTRODUCTION

The purpose of this report is to describe the activities of the Futuring of Business Education Curricular Needs Project during the 1976-1977 Fiscal Year. This section will review the overall purposes of the project; a brief overview of the activities during this Fiscal Year will also be provided. The papers given at the first Statewide Business Review Conference are then reproduced. Finally, a summary of the recommendations of the second Business Education Review Committee meeting will be provided.

Overview of Purposes of Project

The purpose of this project was to create a Statewide Business Education Review Committee whose task was to examine the current status of business education in New York State. The aim of the Committee was to project the needs of the business community in the next 20 years and then make appropriate recommendations for desirable changes or new developments in the Business Education curricula so that they might articulate closely with the changing needs of business in the decades ahead.

The Statewide Business Education Review Committee was selected from the following sources: members of the business community, business educators at the secondary school level, and teacher education faculty concerned with Business Education. The Committee was Chaired by Dr. Willard R. Daggett, an Associate in Education in the State Education Department. The complete list of committee membership is reproduced in Appendix A of this document.

The role of the Institute for Research and Development in Occupational Education, an arm of the Center for Advanced Study in Education of the City University of New York, was to select speakers, to organize the committee meetings and conferences, disseminate the recommendations and presentations made at such meetings, evaluate the meetings, as well as participate in arrangements for future meetings.

There were two committee meetings during the 1976-1977 Fiscal Year. The first of these was in the form of a conference held in Albany on May 19th and 20th, 1977. In addition to members of the Committee, the conference was open to interested individuals in the Albany community, and was attended by members of the State Education Department, members of the Business Education community in the Albany area, and other interested individuals.

The aim of the conference was to make available to the Committee the views of a number of experts from a variety of areas regarding changes in the business environment and climate within the next 20 years, especially as these impact on entry level business employees. A wide range of views was presented to the Committee to serve as a basis for consideration in the two years of the Committee's operation.

Speakers at the May meeting included Dr. Robert Bundy, an educational planning consultant and futurist; Ian Wilson, involved in a corporate planning group at General Electric Company; Vico Henriques, Vice President of the Business and Office Equipment Manufacturer Association; and Emanuel Tobier, economist and member of the School of Public Administration at NYU. These speakers made individual presentations on the first day of the meeting and responded to questions raised by the Committee. Finally, at the end of the first conference day, these speakers were convened as a panel to debate issues raised in their presentations, as well as to address questions raised by members of the Committee or participants in the conference.

On the second day of the conference, Dr. Victor Van Hook, Supervisor of Business Education for the State of Oklahoma, and Professor Jeffrey R. Stewart, Head of the Business Education Program at Virginia Polytechnic Institute, addressed the conference on their views regarding necessary changes in Business Education in the next 20 years. These presentations were followed by a talk from Herbert R. Bienstock, Regional Commissioner of Labor Statistics, U.S. Department of Labor, who discussed the job outlook within the next 20 year period.
Dr. Hobart R. Conover, Chief, Bureau of Business Education, New York State Education Department, then addressed the conference for the purpose of presenting the charge to the Committee

Second Committee Meeting

The second meeting occurred on June 10, at the Graduate Center at the City University of New York, This was a closed meeting attended only by members of the Committee, representatives of the State Education Department, and Consultants to the Committee from the Institute for Research and Development in Occupational Education. The purpose of this meeting was to reflect back upon major themes raised at the Albany meeting, establish a general working plan regarding future Committee activities, and finally to select dates and sites for the next four meetings during the 1977-78 fiscal year. A summary of the major recommendations emerging from this meeting, prepared by Dr. Phillip Atkinson (Baruch College of City University of New York), consultant to the Committee, also appears in this document.

Process of Evaluation of Committee Meetings

Process evaluation of the Committee meetings was conducted by informal interviews with Committee members regarding their impressions of the meetings, and recommendations for future activities. These evaluations suggested that there was general consensus that both the first and second meetings had clearly accomplished their objectives. Reactions indicated that the Committee members felt that a wide range of provocative opinions had been presented to guide and inform the thinking of the Committee during its deliberations. As expected, not every Committee member agreed with all of the views expressed by the speakers. Simultaneously, however, it was felt that the views presented should be considered during the deliberations. Finally, the Committee felt that it was quite valuable to have complete text of the presentations available for reference purposes.

THE FUTURE OF BUSINESS EDUCATION

A Summary of Remarks

by

Herbert Bienstock

What are the job opportunities for people being trained in business education going to be like? Will we need all the people we are preparing? A review of United States employment and unemployment trends in post World War II recessions provides a background to these questions.

To get a sense of what's ahead in the future, what's past is prologue is always very relevant and, so first a step back. We are now at the tail-end of the sixth post World War II recession and it is clear why this one is being referred to as the longest and deepest of them all. The unemployment peak exceeded any of those other post World War II recessions. While those peaks look very troublesome, the recovery periods were even more so. In each of the post World War II recovery periods, as times got better and unemployment declined, it did so only to increasingly higher levels. By the end of the recession of 1961-1962 we were enjoying relatively good times at a 5.6 percent unemployment rate. These trends are depicted in Charts 1-5 appended to the end of the chapter.

That is the national scene and the outlook for business education is obviously going to be substantially impacted by the general outlook. However, the average for the nation does not reveal the different experiences in different sections of the country. The Northeastern United States-the old industrial heartland of New England, the Middle Atlantic, and the North Central states-has lagged substantially and significantly behind the "Sunbelt" in employment growth and in the post World War II period. Employment increases in the Norhteast during the entire third quarter century were at a rate about 1/3 the Sunbelt area. During the recovery period from June 1975, accepted as the trough of the last recession, through November 1976, the North Central states added employment at a 2.7 percent clip, the South by 2.9 percent, the West by 3.3 percent. But the Northeast continued to decline (by 0.5 percent) even during recovery. In fact, when one looks at the recovery period by state, 44 of the 50 states show some recovery during this period. Of the six states that continued to show decline, New York comes in at the bottom with a loss of more than 120,000 jobs. Of the 50 largest metropolitan areas, the New York area is right down there at the bottom, and clustered around it are Albany-Schenectady-Troy, Nassau-Suffolk, Buffalo--our part of the world is down at the bottom of the recovery and continues to be there.

There are only two states in the entire 50 in the Union that have double digit rates for 1976. One is, of course, New York and the other is our sister state New Jersey (Chart 6). In 1976, New York had a 10.3 percent rate, while such places as Nebraska, Wyoming, and North Dakota had rates around 3.5 percent.

From the latest projections by industry for the country as a whole (Chart 7), it is evident that the long-term patterns can be expected to continue. The service industries should continue to be the growth sectors and the goods-producing industries should continue to be the areas of slow growth or no growth. Chart 9 shows the distribution of jobs by major industry division. Contract construction is about 80 percent blue-collar while finance, insurance and real estate is more than 90 percent white collar workers. With the kind of industry trends shown on Chart 7--growth in services, government, finance, insurance and real estate and the like, and slow growth in mining, manufacturing, and the continued disappearance of agricultural jobs--and the kind of job mix that one finds in Chart 9, the result is Chart 8: the occupational trends. Here is the first glimmer of the fact that the kinds of occupations for which business education typically prepares, are and should continue to be the categories that grow most rapidly. Compared with an overall increase in the labor force (Chart 8) of about 20 percent, the clerical worker category is expected to rise by more than 33 percent. That is the first time that this group is projected to be the fastest rising group. This forecast, which is made every decade, had shown the professional and technical group to be rising more rapidly. But recently, we've seen a relative slowdown in the increase in professional and technical workers. With a projection of about 29 percent, or about a 50 percent faster clip than the average growth in the labor force, growth in the professional and technical group has slowed down compared with the previous couple of decades when increases of 40 percent were common. On the other hand, despite all the technology that is emerging in this field, despite the word processing, the photocopiers, etc., the clerical worker category is now the fastest rising group of all. If one looks at the occupations, category by category, clerical is joined by professional and technical, service, managers and administrators as typically the areas where business education at either the secondary or college level plays an important role.

Chart 10 illustrates the fact that white-collar workers now exceed blue-collar workers by substantial numbers--about two out of every three jobs are white-collar jobs. A similar story shows up on Chart 11 and, in a way, a more specific story. If one includes all of the American labor force--not just blue-collar workers, but also the very large service group with about ten million workers, and the agricultural workers, even though they have declined from eight million right after World War II to three million today--for the first time last fall there were more white-collar workers than any other category combined. We have therefore penetrated the 50 percent mark in the white-collar group last September so those projections on Chart 8 are already making themselves felt and give every indication of continuing.

The next chart has some significance for the question of what the opportunities are going to be like for the people who train in business education. First note on Chart 12 the various occupational groups in terms of the proportion of college graduates in each category. Of course, college graduates tend to be concentrated in those first two categories--professional and technical, and managerial and administrative. What's more, despite some of the prevailing myths developed by Carolyn Bird and in a more scholarly way by Richard Freeman from Harvard, Chart 13 shows that compared with the overall increase of about 24 percent projected for the total labor force, college-educated workers are expected to increase at better than a 60 percent rate all through the 1980's.

I make reference to that, because while I realize your concentration of interest may be at the secondary level, I think increasingly we are going to see business education play a more significant role at the university level as well. The worst thing in the world we can do is hire college graduates who are not trained for what they are going to do. On the other hand, students are developing areas of skill that will require education at the university level. I'm trying to bring the next four charts to your attention. Growing opportunities for university graduates and others are very much concentrated in those areas that relate to business education. Charts 14 and 15, which look at college graduates in two sets of supply and demand bars for job openings, probably provide the basis for the kind of thinking found in Carolyn Bird's "The Case Against College." I have the feeling that a century ago there must've been a Carolyn Bird some place, writing a book, saying "Why are we sending all these kids to high school? Who needs all these high school graduates?" What those charts suggest is that in the period ahead the supply and demand for college graduates will be pretty tight but I think it overlooks the reason why. It seems to suggest that our demand growth for these kinds of jobs is not there. That just isn't so. Even during this last recession professional, technical, managerial, and administrative jobs grew, and grew substantially, while the number of blue-collar jobs was declining. They grew by about three quarters of a million from the time the recession began to the trough of the recession. Naturally, unemployment among college graduates would have risen if there were not a recession. Still, they were the categories that were growing. Because the supply and demand are now tight--this after a period of college enrollment growth from two million to ten million--to reach the conclusion that this is a long-term tightness is to ignore some of the data that show up on Charts 16 and 17.

For example, Chart 16 shows the unemployment situation in March 1976, a period whenthe recession was still well with us. For the four-year high school graduate, the unemployment rate was running about 8 percent, or about the national average. For drop-outs, it was 13.6 percent. For those with some college education, including graduates from two-year colleges, a big growth group for business education, the unemployment rate was 6.3 percent. For four-year college graduates, the rate was 2.8 percent. Certainly, that 2.8 percent is up from the 1-1/2 to 2 percent that prevailed for a good part of the 1950's and 1960's when college graduates were carried off on magic carpets. That was the period before the post World War II baby crop began to make its impact on the labor market. The crowd born in 1947 went into college in 1965. By 1969, they were graduating and that's when the job market just turned around.

Chart 17 provides an assessment of the value of business education in terms of making it in the job market. Even among college graduates the employment experience is not the same for everyone. This chart relates to a study done in 1972. Unfortunately there is nothing later, but one, I think, would not be mislead to believe that the experience still obtained. College graduates who received degrees between July 1971 and June 1972 were experienceing about a 9 percent rate of unemployment in the fall of 1972. But social science and humanities majors had unemployment rates of 15 and 16 percent. On the other hand, business and commerce majors were around the 5 percent mark. Even in periods when college graduates holding degrees in social sciences and humanities were running 15 and 16 percent, business majors were experiencing 1/3 the rate.

What about the future? Data suggest that this white-collar growth really has been a long-term development. Chart 18 shows the projected proportion of total jobs that are expected to be white-collar to be 52 percent for 1985. Recalling that we broke the 50 percent mark last September, one can see how out of date this chart really is although it is only about a year old. Does anyone think that when we get to 1985 the proportion in white-collar will be only 52 percent? Obviously, we are probably understating the projection.

Future workers are expected to be better educated, too. This is part of the calculus whether it is business education or any other field. Sure, the jobs will be growing and growing rapidly, but so will the educational attainment of the people competing for those jobs up the road in the 1980's and 1990's. And the competition even for growing numbers of jobs will be great.

On Chart 23 are some specifics for the country as a whole for the period through 1985. The table below it is for New York State. How do we link what I've started out with and what I've just been through? There are two components to this topic: one, the fact that we are in a part of the country that might well be described by the old statistician's adage that you can drown in a lake that has an average depth of 6 inches if you happen to find that 12 foot hole; second, why all these projections that I've been pointing to in terms of the road ahead are for that national 6 inch average. What about the fact that we, in New York State, are in a sense in a 12 foot hole--a part of the country that is not growing? In fact, many of us are in parts of that part where no growth would be considered a very satisfactory condition because we are in places like New York City which lost 650,000 jobs since 1969. We are functioning in an area where we've lost more jobs than exist in the entire City of Detroit, or for that matter the entire Cincinnati area.

One encouraging point, however, is that job opportunities do not develop primarily from growth but from replacement. People die, retire, or leave the labor force for, as we put it, purposes of family formation.

A case in point is an area like teaching. Last year and this year and next year there will be more college graduates going into teaching than any other occupation. Why? It is the largest professional occupation--about three million teachers currently--and that means each year thousnads of teachers will be replaced. Even in an area like teaching, the replacement needs alone, though they are tightening up in terms of the total country, are high in New York or Buffalo. The total needs are still so great for replacement that more college graduates go into elementary and secondary teaching jobs than any other category.

That doesn't mean it's a good job market because the labor market, like every other market, consists of two components--supply and demand. The demand is still there but the supply is far greater than the demand. So, it is a lousy job market for college graduates, but nevertheless more people were placed in that job. Why am I saying that? The top line of table 23 tells the story: the 3rd column from the right shows that we anticipate 57 million job openings in this country between 1974 and 1985. Incidentally, notice how close that figure is to 60 million. Not too long ago, Henry Wallace wrote a book entitled "60 Million Jobs," and people laughed him out of cours. They even threw him out as Vice-President. What kind of blithering idiot can conceive of an America where you have 60 million jobs? Well forget it! By now we have 60 million job openings. We have a labor force of a hundred and three million projected, along with 60 million job openings.

Of the 60 million jobs, growth counts for about 17 million (second column on right - Chart 23) and in our part of the country it accounts for zero and, in fact, minus. But look just to the right of that figure. When one thinks of youngsters in New York State who are training in business education, will there be jobs for them? Most jobs are going to be those 40 million replacement ones. People who die or retire--and unless one knows that there will be a moratorium on deaths and retirements--a good part of those jobs are going to be there even with slowdowns. Maybe a little lower, but even with slowdowns in terms of replacement, it's there. And even in New York State.

Total job openings are expected to be 3-1/2 million. Almost nothing in the way of growth--389,000 and that may be optimistic. If we had it for our central cities, they would probably all be minus. And for New York city that line would be minus 312,000. The growth is minus--expecting another 300,000 jobs lost by 1980. But the replacement figure is where the jobs are. Three million job openings are expected simply because not everybody is going to leave town and those who stay will need to replace workers who retire or die.

Examine the relationship in New York State between the total job openings line and the white-collar line--2.5 million of the 3.5 million are white-collar. The proportion of white-collar jobs to the total in New York State is not at the 50 percent or the 52 percent mark, which is the projected proportion nationwide. The more meaningful figure is the number of job openings. That's where you get down to table 24. Two and one-half million our of 3-1/2 million is a high proprotion of white-collar jobs. Most of the openings should come from replacement needs. There is a little faster growth in white-collar because the blue collar group is actually declining, but it is still primarily replacement opportunities.

On Chart 25 is a list of 260 occupations along with anticipated job openings nationwide until 1985. Those little black dots are next to jobs that tend to have relationships with business education. On the top left is secretaries and stenographers and right below them are file clerks, even with all the automation. The typists are up there, number 5. At any rate, while automation has inhibited a lot of growth, in a certain way the demand for typists is stronger in lower levels because what automation always enables us to do is provide more bodies, not necessarily cut down. The best example of that is the banking industry.

Unlike the newspaper industry, where we knew how to produce papers with automated equipment at least 20 years ago but never did it, there has been no presence of organized labor holding us back in the banking industry. On the other hand, during that period when we were using automation, we eliminated 8 or 9 papers in New York City and the jobs went anyway. But in banking, the teller is handling all kinds of equipment and banks are able to provide new products. Employment in banking has been growing by leaps and bounds. Tellers are, for example, one of the fastest growing occupations despite the fact that automation has had an enormous influence in banking. The reason is new products.

However, in the garment industry, for example, there has been no technological development ant so New York cannot compete with Hong Kong. Our labor costs stay low only when we keep up with them technologically and then we lose the jobs anyway.

The point of all this is that as one looks at table 25, one can see that the dots are next to the jobs that are up near the fastest growing of the occupations--lots more dots on the left side than on the right side. It isn't just a matter of overall generalization. Rather, it gets to a very hard and specific sort of thing. What's more, the period ahead is likely to be one in which the demand for youngsters that have training in business education will grow by leaps and bounds. We have been through this recent recession period; we have been through a 25-year period in which the labor market was inundated by that post war baby crop. (The ones born in 1947; by 1963 they were 16 years old, and were inundating the labor market as high school dropouts. In 1963, the high school dropout found that after four post World War II recessions the labor market wasn't looking for high school dropouts. Then, of course, by 1969 the college job market gor inundated with the college graduates.)

This is part of what created the difficult employment problem for youngsters that are getting out of school now. For example, last year we added 2.8 million jobs in this country and were not able to bring the unemployment rate down in any significant way. Suppose we had had one million fewer entrants in that period. The unemployment rate would be down at least one or more percentage points by now. The point of all this is that we are heading for a new period in terms of the spectrum of the American economic scene. It is important to know what is going to happen to business education graduates in the future.

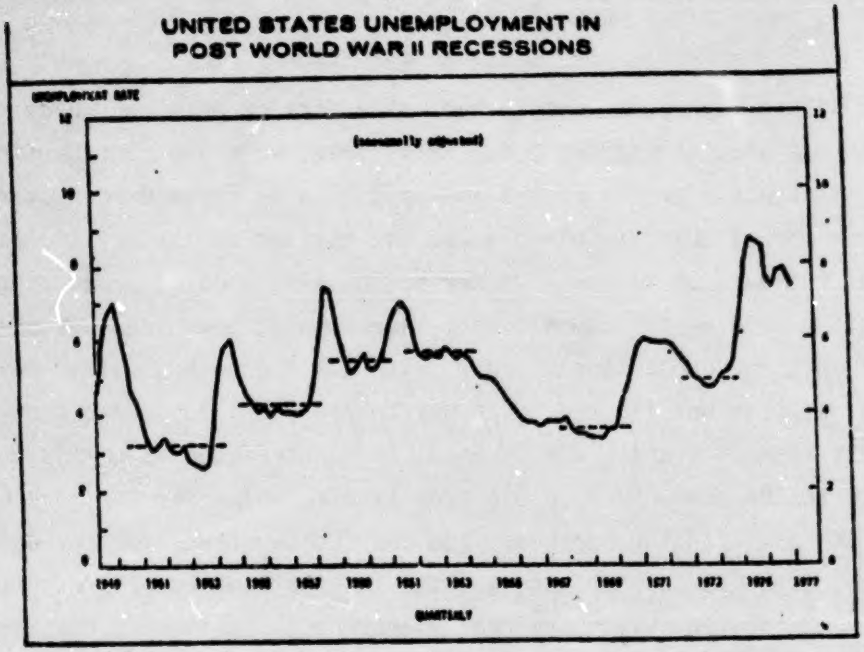
Examine Chart 27 with the line teetering off in 1978 or so. What is is talking about is the impact of a different group--not the post war baby crop who reach age 30 this year. The youngsters born in 1947, those under 30 who were heavily dependent, had to be kept in school or in jail or some place at great cost. during the next 15 years they are up from 30 to 45--that period of concentrated consumption, production, and so forth. We are bound to see an improved economic scene.

Chart 28 has some numbers that are the most important numbers around at the present time and that is what's happening to births. Although it is shown only for the United States and New York, be assured it's a very extensive worldwide phenomenon. These dropping births are true for the country as a whole. Births dropped from 4 million a year to 3 million a year and what this means is that as we get up the road, if you weren't born in 1963, you are not 14 years old today; in 1981 you're not going to college; and in 1985 you are not graduating. Incidentally, Chart 29 confirms the leveling off of degrees awarded. The demand in business-oriented, knowledge-oriented society is going to continue upward and consequently, when we get into those middle years, big shortages will occur. To talk about shortages today with a 7 percent unemployment rate sort of gets one ready to be put into a straight-jacket. But it is inevitable and for the first time since World War II we are in a position to prepare youngsters for a labor market that is friendly and not hostiee in the way the labor market has been up to now. We may not be very good at projecting the inflation rate or the unemployment rate or what have you, but one can count on these projections. Why? With all the technological developments, we have not figured out a way to produce a 20 year old person in less than 20 years. What's more, this phenomenon is not just countrywide. In the same chart, a big drop is also shown for New York City. It's the same for the Northeast and the Southwest and for any part of the country. It is happening and the implications for youngsters that are prepared with skills are really enormous. The market has, as I said before, two components. Whatever you do to improve their readiness for that job market helps greatly. But if there is not job opportunity growth then what good does it do? Job opportunity growth does not necessarily mean growth alone. Job opportunity growth also arises due to reasons of replacement and headed up the road is a fantastic period where the oldsters drop out and there won't be enough youngsters.

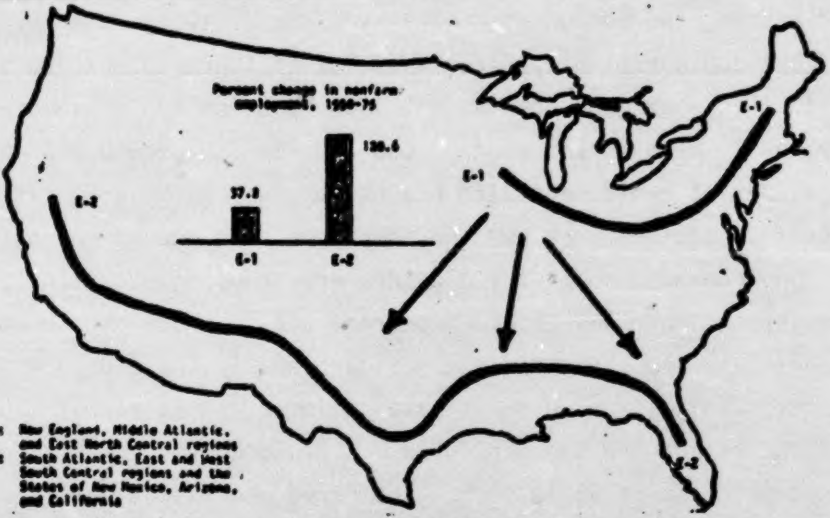
One can wonder why the oldsters are dropping out. In 1930 the unemployment rate was about 25 percent and in those days when people did not have jobs they did not get married; in those days when they did not get married, they did not have children. That's what happened in 1930 and hence, the big gap. The man or woman who was not born in 1930 is not going to be 55 in 1985. The crowd who wasn't born in 1930 is not 47 today and so we are headed for a substantially improved total picture. Which means what? If you throw grass seeds on a piece of concrete, you can be sure you won't get a lawn. If you throw it on a nice , pliable, well-worked piece of earth, you are still not certain, but your chances are enormously improved.

In conclusion, up the road lies a nice, pliable, piece of earth. You, as people concerned with business education, have a challenge to see to it that the grass seed that gets out is pretty good and the conditions are better. But chances of success in the decade ahead are enormously better than they have been in the decade past.

①


UNITED STATES UNEMPLOYMENT IN POST WORLD WAR II RECESSIONS

②



E-1: New England, Middle Atlantic, and East North Central regions
E-2: South Atlantic, East and West South Central regions and the States of New Mexico, Arizona, and California

③

Changes in nonfarm payroll employment by region,
June 1975- November 1976

(numbers in thousands)

Region	Total employment		Change, June 1975 November 1976	
	June 1975	November 1976	Number	Percent
Northeast..........	18,732.7	18,633.1	-99.6	-0.5
North Central......	21,211.1	21,785.3	574.2	2.7
South..............	22,827.6	23,482.7	655.1	2.9
West...............	13,865.9	14,324.6	458.7	3.3

④

Changes in payroll employment by State, June 1975-November 1976

(numbers in thousands)

State	Total Employment November 1976	Number change June 1975-Nov. 1976	State	Percent change June 1975-Nov. 1976
California..........	8,061.6	206.1	Idaho............	9.0
Texas	4,575.0	167.5	Utah	8.9
Michigan...........	3,285.1	150.0	Arizona	7.2
Indiana	2,006.3	77.6	Kansas..........	5.8
Georgia............	1,778.4	60.6	Wyoming	5.8
Ohio................	4,107.7	60.4	New Mexico.....	5.8
South Carolina.....	1,028.4	53.8	North Dakota....	5.5
Minnesota..........	1,536.5	53.1	South Carolina...	5.5
Arizona............	760.3	50.8	Mississippi	5.3
Virginia	1,809.7	48.4	Nevada..........	5.2
Alabama...........	1,194.3	47.1	Arkansas........	4.9
Missouri...........	1,772.0	46.4	Oregon..........	4.9
Kansas	840.8	46.1	Michigan	4.8
Wisconsin..........	1,724.4	44.7	New Hampshire..	4.6
Oregon	886.7	41.5	Oklahoma.......	4.4
Kentucky...........	1,081.7	40.9	Alabama.........	4.1
Utah...............	481.0	39.5	Indiana	4.0
Oklahoma..........	925.9	39.3	Kentucky	3.9
Maryland	1,470.0	38.0	Colorado	3.8
Tennessee	1,531.6	37.3	Texas...........	3.8
Colorado...........	988.9	35.9	Minnesota	3.6
Mississippi	690.8	34.9	Rhode Island....	3.6
Iowa...............	1,029.9	33.6	Georgia	3.5
Illinois	4,476.5	32.0	Iowa	3.4
Washington.........	1,262.6	31.5	Vermont.........	3.3
Arkansas	648.3	30.0	Nebraska.......	2.8
Louisiana..........	1,216.5	26.7	Maryland	2.7
Idaho..............	300.0	24.8	Missouri	2.7
New Mexico........	330.0	20.3	Virginia	2.7
Nebraska	572.8	15.8	Wisconsin	2.7
Nevada	283.2	14.0	California	2.6
New Hampshire....	313.1	13.9	Washington	2.6
West Virginia	575.2	12.7	Tennessee......	2.5
Rhode Island......	358.5	12.4	West Virginia...	2.3
North Dakota......	216.7	11.2	Louisiana.......	2.2
Wyoming..........	161.6	8.6	Delaware.......	2.0
Florida............	2,726.3	7.1	Ohio	1.5
North Carolina	1,999.0	6.2	Maine	1.2
Vermont...........	164.2	5.3	South Dakota....	1.1
Delaware	231.6	4.6	Illinois	0.7
Maine	360.4	4.3	Connecticut.....	0.3
New Jersey	2,695.4	3.4	Florida.........	0.3
Connecticut	1,240.3	3.4	North Carolina..	0.3
South Dakota......	216.6	2.4	New Jersey.....	0.1
Montana	247.7	-0.4	Montana........	-0.2
Hawaii.............	341.0	-2.7	Pennsylvania....	-0.2
Pennsylvania......	4,437.7	-8.2	Massachusetts ..	-0.5
Alaska.............	160.1	-11.2	Hawaii	-0.8
Massachusetts.....	2,320.6	-12.8	New York.......	-1.8
New York.........	6,733.7	-121.3	Alaska	-6.5

⑤

Changes in payroll employment, major metropolitan areas, June 1975-November 1976

(numbers in thousands)

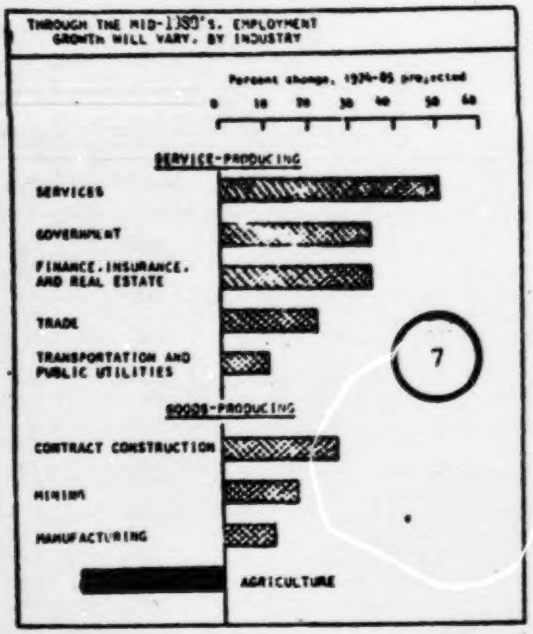
Area	Total Employment November 1976	Number change June 1975-Nov. 1976	Area	Percent change June 1975-Nov. 1976
Detroit	1,651.5	78.5	Phoenix	8.1
Los Angeles-Long Beach	3,102.7	55.4	Salt Lake City	7.9
Houston	1,047.7	50.3	Anaheim-Santa Ana-Garden Grove	7.7
Anaheim-Santa Ana-Garden Grove	620.1	44.5	San Jose	6.0
Dallas-Fort Worth	1,107.1	34.7	Portland	5.2
Phoenix	453.4	34.1	Detroit	5.0
San Jose	496.2	28.3	Houston	5.0
Chicago	3,029.9	25.3	Nashville-Davidson	4.8
Salt Lake City	344.5	25.1	Providence-Warwick-Pawtucket	4.1
Minneapolis-St. Paul	925.2	24.3	Denver-Boulder	3.8
Portland	464.0	22.9	Greensboro-Winston-Salem-High Pt.	3.7
Denver-Boulder	626.0	22.7	Oklahoma City	3.7
Atlanta	752.6	18.9	Sacramento	3.6
Baltimore	864.3	18.8	San Diego	3.3
Philadelphia	1,795.4	18.2	Dallas-Fort Worth	3.2
Philadelphia City	813.2	8.6	Rochester	3.1
Washington	1,361.2	17.3	Columbus	2.8
San Diego	487.3	15.5	New Orleans	2.8
Providence-Warwick-Pawtucket	371.6	14.6	Minneapolis-St. Paul	2.7
Nashville-Davidson	304.5	14.0	San Antonio	2.7
San Francisco-Oakland	1,340.1	13.9	Atlanta	2.6
Seattle-Everett	592.3	13.8	Dayton	2.5
Kansas City	555.3	12.5	Seattle-Everett	2.4
Columbus	460.6	12.4	Kansas City	2.3
Greensboro-Winston-Salem-High Pt.	337.2	12.1	Baltimore	2.2
Cleveland	866.9	12.0	Memphis	2.2
Rochester	397.5	12.0	Los Angeles-Long Beach	1.8
New Orleans	429.4	11.8	Buffalo	1.6
Oklahoma City	321.0	11.5	Milwaukee	1.6
St. Louis	912.5	11.5	Birmingham	1.5
Sacramento	327.1	11.3	Cleveland	1.4
Milwaukee	605.1	9.4	Miami	1.4
San Antonio	320.1	8.5	Riverside-San Bernardino-Ontario	1.4
Dayton	329.3	8.1	Cincinnati	1.3
Miami	581.9	8.0	St. Louis	1.3
Buffalo	490.0	7.7	Washington	1.3
Memphis	324.6	7.1	Tampa-St. Petersburg	1.1
Cincinnati	546.7	6.9	Philadelphia	1.0
Riverside-San Bernardino-Ontario	343.3	4.7	Philadelphia City	1.1
Birmingham	311.6	4.5	San Francisco-Oakland	1.0
Tampa-St. Petersburg	412.0	4.4	Louisville	0.9
Louisville	351.3	3.1	Chicago	0.8
Newark	848.5	1.6	Newark	0.2
Boston	1,269.3	0.8	Boston	0.1
Hartford	339.4	-0.9	Nassau-Suffolk	-0.2
Nassau-Suffolk	800.5	-1.4	Hartford	-0.3
Indianapolis	449.7	-2.0	Indianapolis	-0.4
Hackensack	342.2	-4.1	Hackensack	-1.2
Albany-Schenectady-Troy	303.8	-4.2	Albany-Schenectady-Troy	-1.4
Pittsburgh	872.1	-18.3	Pittsburgh	-2.1
New York	3,578.9	-117.3	New York	-3.2
New York City	3,183.6	-117.0	New York City	-3.5

⑥

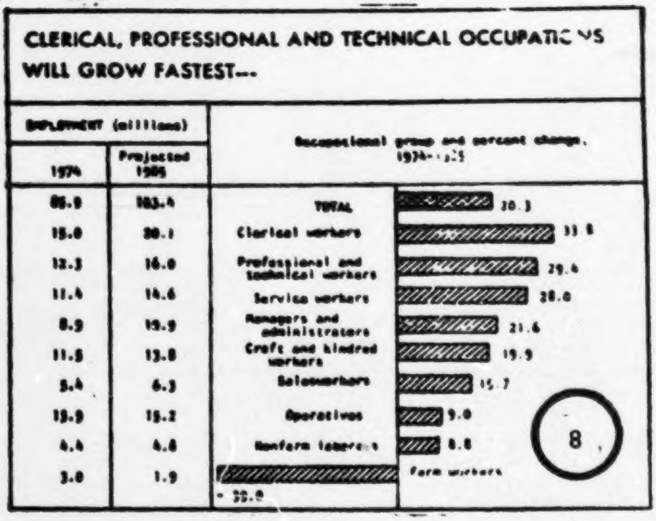
UNEMPLOYMENT AND LABOR FORCE ESTIMATES BY STATE, 1976

State	Unemployment rate	Number of unemployed	Civilian labor force	State	Unemployment rate	Number of unemployed	Civilian labor force
New Jersey..............	10.4	345	3,307	Alabama.................	6.8	100	1,480
New York................	10.3	794	7,735	Louisiana...............	6.8	101	1,485
Arizona.................	9.8	93	947	Maryland................	6.8	128	1,900
Hawaii..................	9.8	39	400	Mississippi.............	6.6	62	943
Connecticut.............	9.5	139	1,475	Illinois................	6.5	332	5,076
Massachusetts...........	9.5	263	2,762	New Hampshire...........	6.4	25	588
Oregon..................	9.5	102	1,070	Missouri................	6.2	133	2,126
Michigan................	9.4	374	3,997	North Carolina..........	6.2	159	2,556
California..............	9.2	889	9,708	Indiana.................	6.1	148	2,427
District of Columbia....	9.1	30	333	Montana.................	6.1	20	331
New Mexico..............	9.1	43	466	Tennessee...............	6.0	110	1,826
Florida.................	9.0	314	3,476	Colorado................	5.9	71	1,217
Nevada..................	9.0	27	305	Minnesota...............	5.9	110	1,865
Delaware................	8.9	23	259	Virginia................	5.9	136	2,306
Maine...................	8.9	42	472	Idaho...................	5.7	21	366
Vermont.................	8.7	19	216	Texas...................	5.7	318	5,535
Washington..............	8.7	137	1,587	Utah....................	5.7	29	513
Georgia.................	8.1	179	2,206	Kentucky................	5.6	81	1,448
Rhode Island............	8.1	35	430	Okalahoma...............	5.6	65	1,159
Alaska..................	8.0	13	157	Wisconsin...............	5.6	122	2,175
Pennsylvania............	7.9	406	5,120	Kansas..................	4.2	46	1,086
Ohio....................	7.8	369	4,730	Wyoming.................	4.1	7	179
United States...........	7.7	7,288	94,773	Iowa....................	4.0	53	1,335
West Virginia...........	7.5	51	679	North Dakota............	3.6	10	279
Arkansas................	7.1	62	869	South Dakota............	3.4	11	311
South Carolina..........	6.9	87	1,256	Nebraska................	3.3	24	719

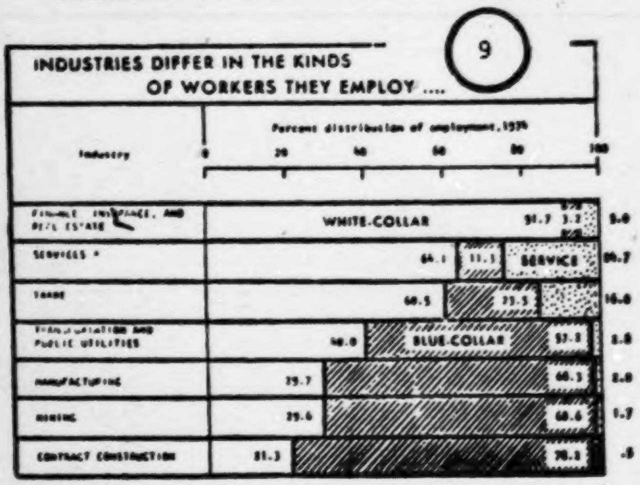
U.S. PROJECTIONS SHOW ....



CLERICAL, PROFESSIONAL AND TECHNICAL OCCUPATIONS WILL GROW FASTEST---

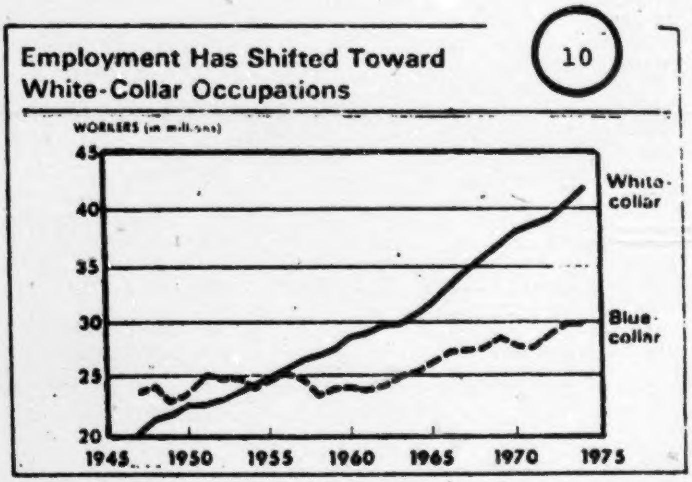


INDUSTRIES DIFFER IN THE KINDS OF WORKERS THEY EMPLOY ....



* Excludes private household workers.

Employment Has Shifted Toward White-Collar Occupations



EMPLOYMENT HAS SHIFTED TOWARD WHITE-COLLAR OCCUPATIONS ....

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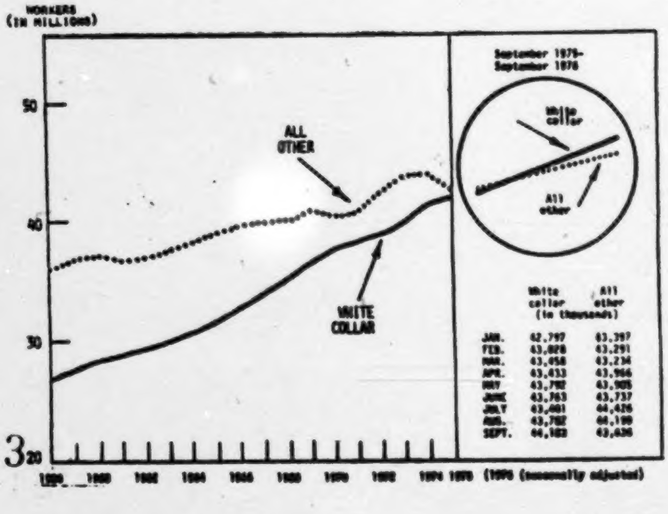

	White collar	All other
	(in thousands)	
JAN.	42,797	43,397
FEB.	43,028	43,291
MAR.	43,058	43,234
APR.	43,433	43,966
MAY	43,792	43,905
JUNE	43,763	43,737
JULY	43,401	44,426
AUG.	43,702	44,190
SEPT.	44,102	43,626

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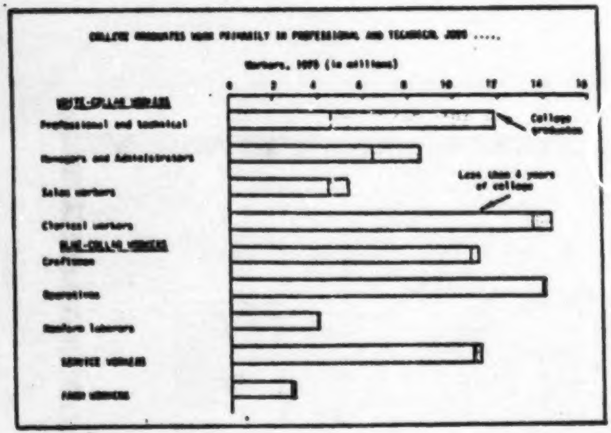

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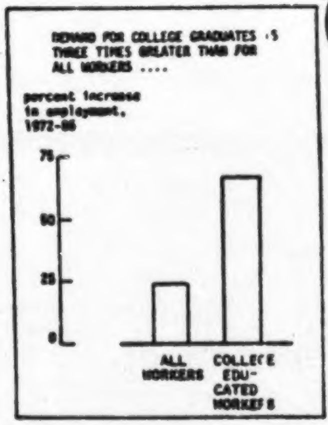

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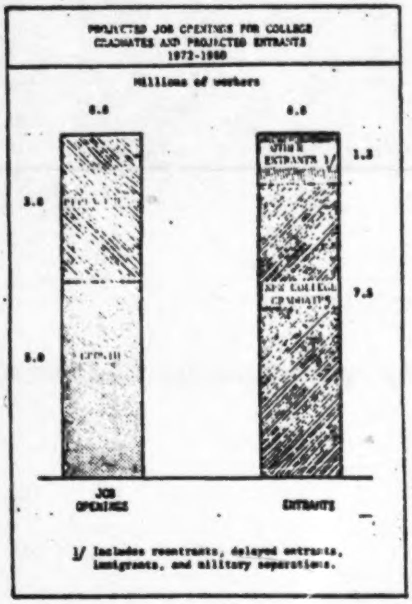

1/ Includes reentrants, delayed entrants, immigrants, and military separations.

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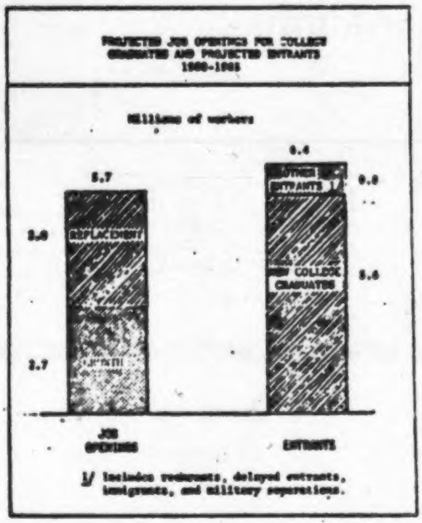

1/ Includes reentrants, delayed entrants, immigrants, and military separations.

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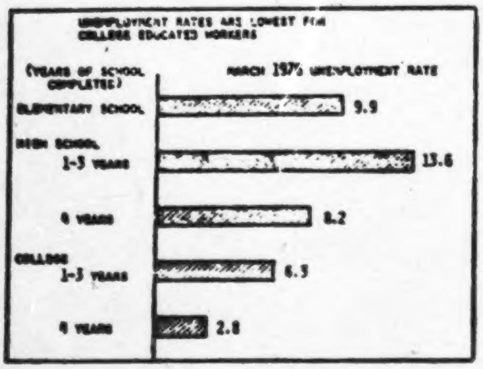

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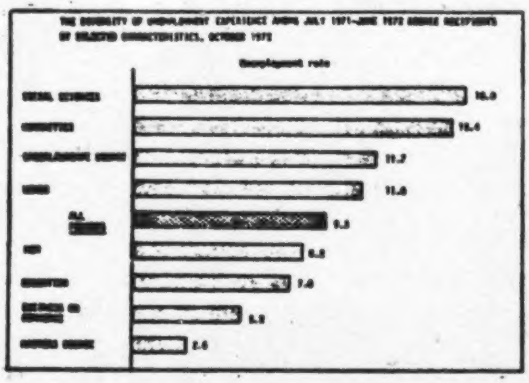

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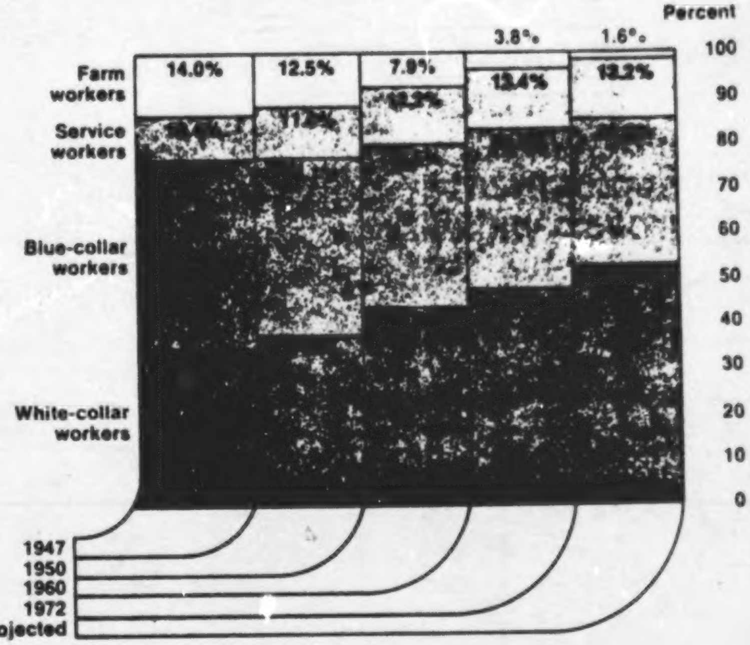
Employment has been shifting from blue-collar to white-collar occupations



Source Bureau of Labor Statistics

☐ Employment of white-collar workers is expected to continue to grow faster than that of other occupational categories and will account for more than half of total employment by 1985.

☐ Blue-collar and farm workers are expected to continue to decline as a proportion of total employment.

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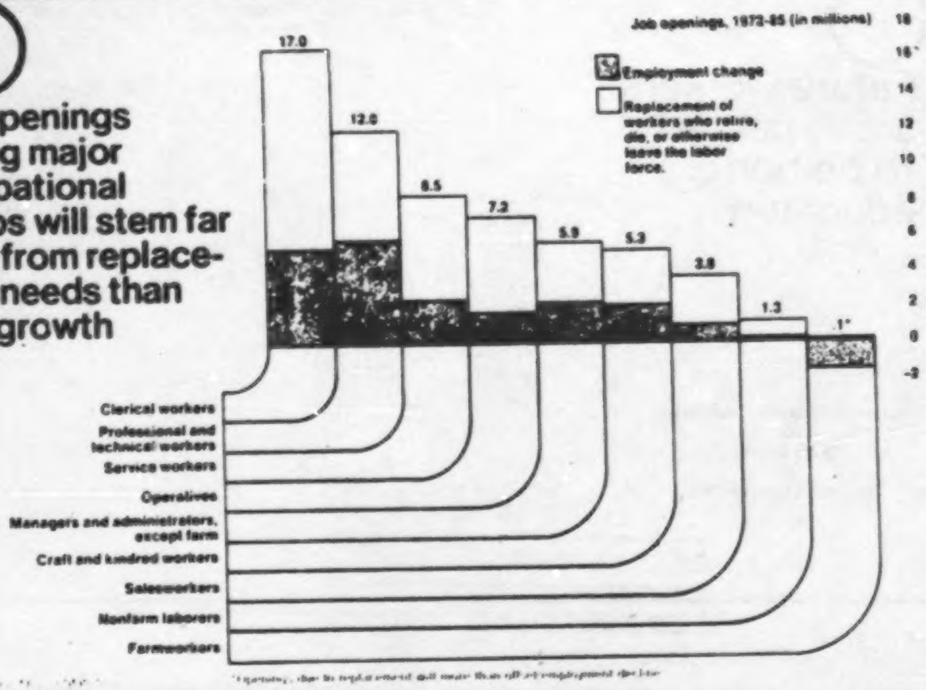
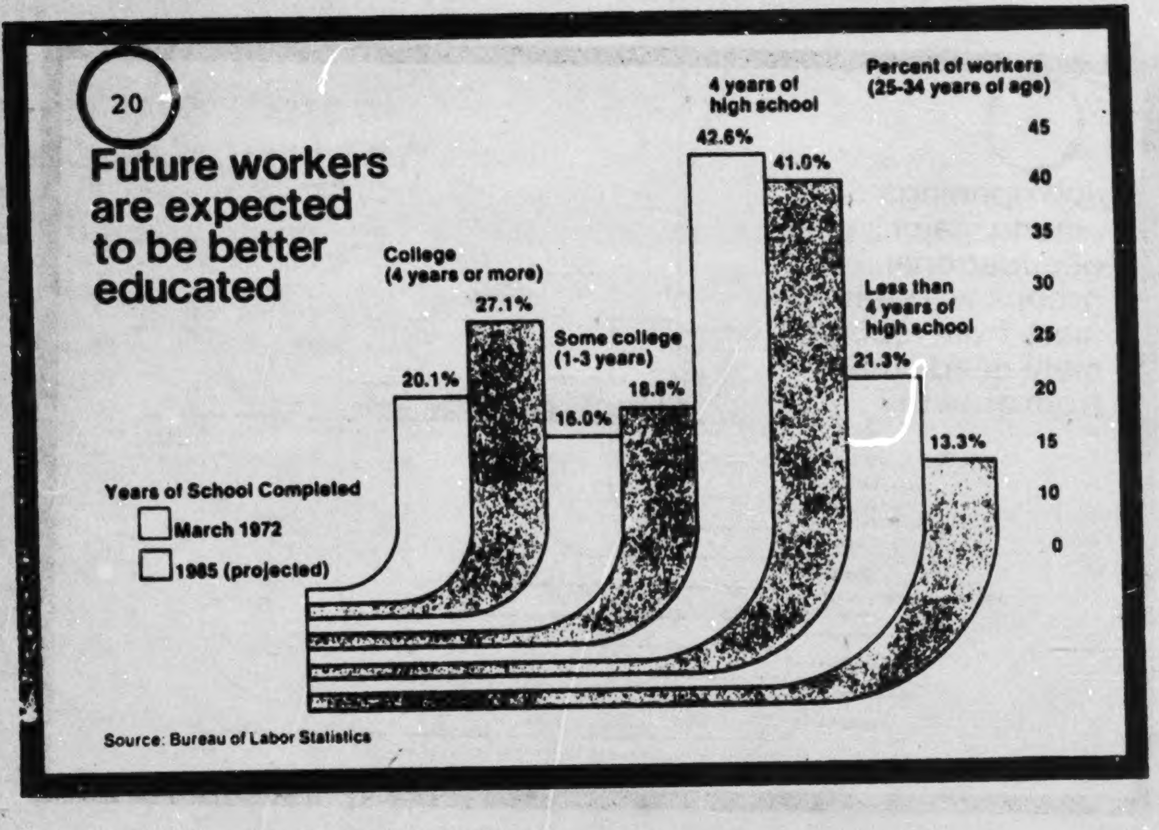
Job openings among major occupational groups will stem far more from replacement needs than from growth



☐ On the average, more than 4.7 million jobs are expected to become available each year between 1972 and 1985. More than half of these will be in three major occupational groups, clerical, professional, and service workers.

☐ Despite the expected decline in employment for farm workers, job openings will occur each year, because the numbers of deaths and retirements are expected to be greater than the decline in employment.



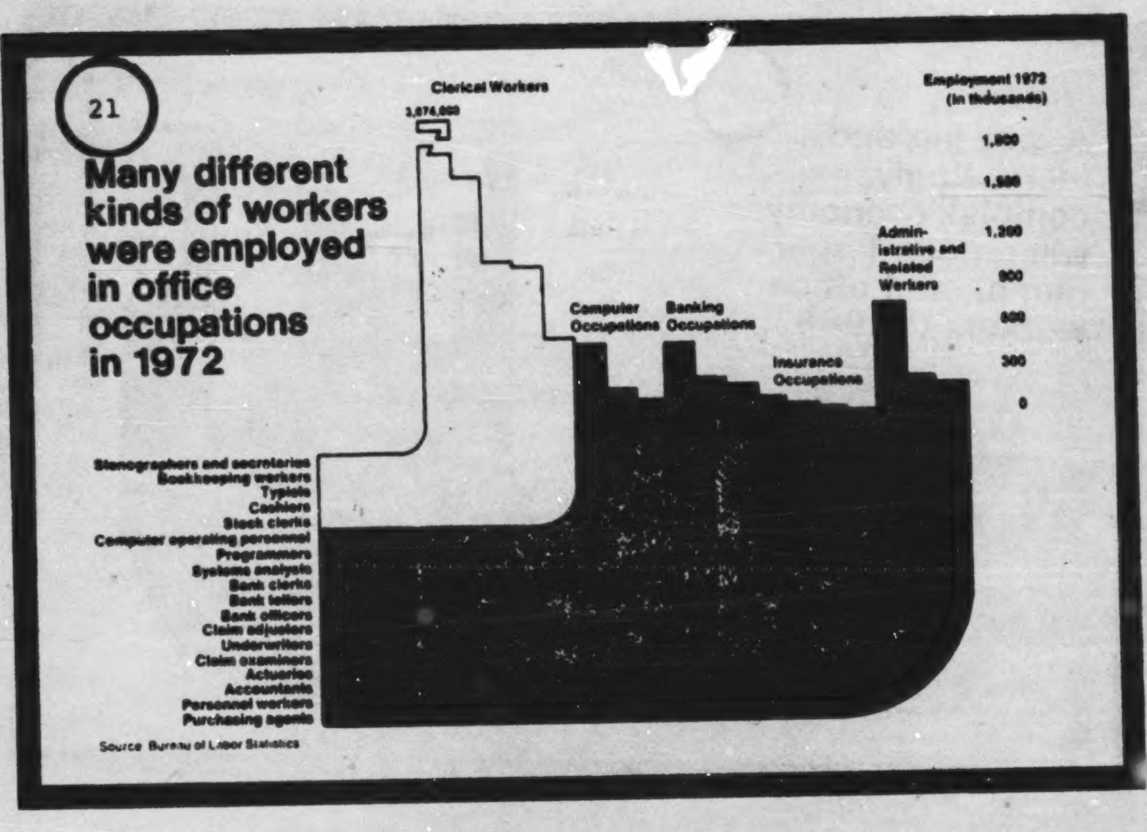
20

Future workers are expected to be better educated

Source: Bureau of Labor Statistics

☐ In 1985, almost 9 of every 10 workers 25-34 years of age are expected to have a high school education or more; in 1972, about 8 out of 10 workers 25-34-years-old had this level of education.

☐ In 1985, about 27 percent of the labor force 25-34 years of age will have completed 4 years of college or more, compared with 20 percent in 1972.



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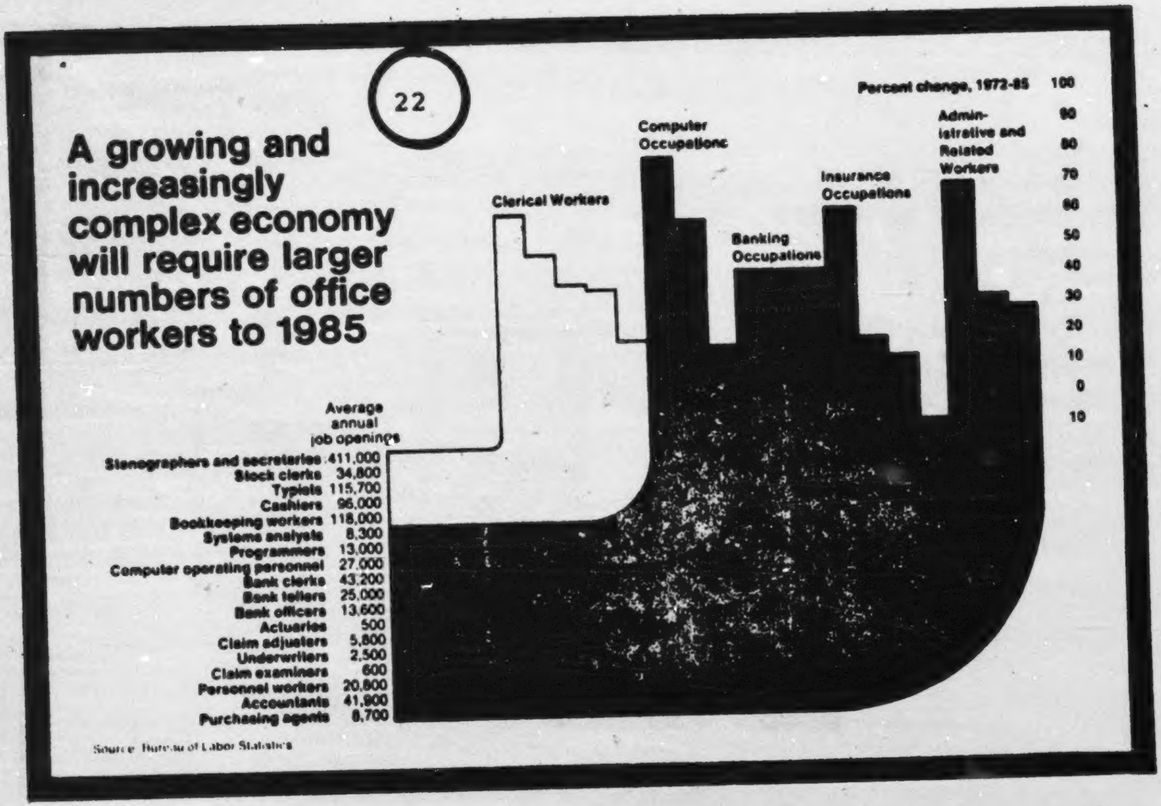
Many different kinds of workers were employed in office occupations in 1972

Source Bureau of Labor Statistics

☐ Millions of workers are employed in office occupations. The chart gives examples of occupations in which large numbers of these workers are employed.

☐ Office work offers jobs for people with a great variety of skills and educational backgrounds. Many clerical workers—for example, stenographers and typists—can prepare for their jobs in high school or vocational school. Systems analysts, accountants, and many in other office occupations typically have college degrees.



A growing and increasingly complex economy will require larger numbers of office workers to 1985

	Average annual job openings
Stenographers and secretaries	411,000
Stock clerks	34,800
Typists	115,700
Cashiers	96,000
Bookkeeping workers	118,000
Systems analysts	8,300
Programmers	13,000
Computer operating personnel	27,000
Bank clerks	43,200
Bank tellers	25,000
Bank officers	13,600
Actuaries	500
Claim adjusters	5,800
Underwriters	2,500
Claim examiners	600
Personnel workers	20,800
Accountants	41,900
Purchasing agents	8,700

Source: Bureau of Labor Statistics

☐ Office occupations are expected to be among the fastest growing through the mid-1980's because of anticipated growth in industry and its increased use of these workers.

☐ Even in occupations that do not have high growth rates, many job openings will result each year from the need to replace workers who die, retire, or leave their jobs for other reasons.

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Projected Employment Growth by Major Occupational Group, 1974–85

(In thousands)

Occupational Group	1974 Employment	Projected 1985 Employment	Percent Change	Openings		
				Total	Growth	Replacements
Total	85,936	103,400	20.3	57,600	17,400	40,200
White collar workers	41,739	53,200	27.5	34,300	11,500	22,800
Professional and technical workers	12,338	16,000	29.4	9,400	3,600	5,700
Managers and administrators	8,941	10,900	21.6	5,200	1,900	3,200
Salesworkers	5,417	6,300	15.7	3,400	900	2,600
Clerical workers	15,043	20,100	33.6	16,300	5,100	11,300
Blue-collar workers	29,776	33,700	13.2	12,500	3,900	8,600
Craft and kindred workers	11,477	13,800	19.9	5,100	2,300	2,800
Operatives[1]	13,919	15,200	9.0	6,000	1,300	4,800
Nonfarm laborers	4,380	4,800	8.8	1,400	400	1,100
Service workers	11,373	14,600	28.0	11,000	3,200	7,800
Farm workers	3,048	1,900	−38.0	−200	−1,200	1,000

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PROJECTED EMPLOYMENT GROWTH BY MAJOR OCCUPATIONAL GROUP
NEW YORK STATE 1970 - 1980

(in thousands)

Occupational Group	1970 Employment	Projected 1980 Employment	Percent Change	Openings		
				Total	Growth	Replacements
TOTAL	7536.5	7926.1	5.2	3503.8	389.6	3114.2
White-collar Workers	4181.4	4689.1	12.1	2492.8	507.8	1986.0
Professional and Technical	1258.1	1496.2	18.9	748.9	238.2	510.8
Managers and Administrators	686.0	771.4	12.4	326.1	85.3	240.8
Salesworkers	597.1	628.5	5.3	291.9	31.4	260.5
Clerical Workers	1640.1	1793.0	9.3	1125.9	152.9	973.0
Blue-colar Workers	2244.6	2102.9	- 6.3	465.5	-141.7	607.2
Craft and Kindred Workers	923.1	922.2	- 0.1	218.8	- 0.9	219.8
Operatives	1079.6	943.2	-12.6	200.6	-136.5	337.1
Nonfarm Laborers	241.8	237.5	- 1.8	46.0	- 4.3	50.3
Service Workers	1021.5	1054.0	3.2	523.2	32.5	490.7
Farm Workers	89.1	80.0	-10.1	22.3	- 9.0	31.4

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ANTICIPATED JOB OPENINGS, SELECTED OCCUPATIONS, UNITED STATES, 1974-85

No.	Occupations	Openings 1974-85
● 1.	Secretaries and stenographers	4,829,000
● 2.	File clerks	3,075,000
3.	Retail trade salesworkers	2,0[illegible]0,000
4.	Building custodians	1,6[illegible],000
● 5.	Typists	1,175,000
6.	Nursing aides, orderlies, and attendants	1,153,000
● 7.	Bookkeeping workers	1,131,000
8.	Waiters and waitresses	1,1[illegible],000
● 9.	Cashiers	1,067,000
10.	Kindergarten and elementary school teachers	1,014,000
11.	Licensed practical nurses	1,0[illegible],000
12.	Cooks and chefs	864,000
13.	Registered nurses	701,000
14.	Assemblers	693,000
15.	Blue-collar worker supervisors	671,000
● 16.	Receptionists	632,500
● 17.	Bank clerks	594,000
18.	Private household workers	572,000
19.	Inspectors (manufacturing)	561,000
20.	Cosmetologists	550,000
21.	Carpenters	549,100
● 22.	Accountants	500,500
23.	Industrial machinery repairers	467,500
24.	Local truckdrivers	423,500
25.	Secondary school teachers	412,500
26.	Engineering and science technicians	352,000
27.	Social workers	335,500
● 28.	Bank tellers	330,000
29.	Wholesale trade salesworkers	330,000
30.	Food counter workers	321,200
● 31.	Real estate salesworkers and brokers	313,500
32.	Construction workers	312,400
33.	Telephone operators	308,000
● 34.	Computer operating personnel	302,500
35.	Medical assistants	299,200
36.	Operating engineers (construction machinery operators)	297,000
37.	Welders	297,000
38.	Lawyers	290,400
39.	Guards	286,000
40.	Stock clerks	286,000
41.	Automobile mechanics	268,400
42.	Plumbers and pipefitters	258,500
43.	Personnel and labor relations workers	253,000
44.	Physicians and osteopathic physicians	253,000
● 45.	Statistical clerks	253,000
46.	Police officers	242,000
47.	Shipping and receiving clerks	225,500
● 48.	Insurance agents, brokers, and underwriters	213,400
49.	Medical laboratory workers	206,800
50.	Painters and paperhangers	199,100
51	Machine tool operators	198,000
● 52.	Health services administrators	191,400
53.	Drafters	190,300
54.	Dining room attendants and dishwashers	189,200
● 55.	Bank officers	176,000
56.	Bartenders	167,200
57.	All-round machinists	159,500
58.	Dental assistants	159,500
59.	Library technicians and assistants	155,100
60.	College and university teachers	154,000
61.	Maintenance electricians	151,800
● 62.	Programmers	143,000
● 63.	Office machine operators	140,800
64.	Gasoline service station attendants	139,700
65.	Electrical engineers	134,200
66.	Long distance truckdrivers	132,000
67.	Electricians (construction)	128,700
● 68.	Purchasing agents	128,700
69.	Medical record technicians and clerks	125,500
70.	Air-conditioning, refrigeration and heating mechanics	119,900
71.	Life scientists	117,700
72.	Librarians	114,400
73.	Postal clerks	106,700
74.	Manufacturers' salesworkers	104,500
75.	Civil engineers	102,300
76.	Power truck operators	100,100
● 77.	Systems analysts	100,100
● 78.	Buyers	99,000
79.	Home economists	99,000
80.	Radiologic (X-ray) technologists	94,600
81.	Social service aides	92,400
82.	Health and regulatory inspectors (government)	86,900
83.	Mechanical engineers	86,900
84.	Firefighters	80,100
85.	Industrial engineers	79,200
● 86.	Advertising workers	78,100
87.	Respiratory therapists	74,800
● 88.	Claim representatives	72,600
89.	Instrument repairers	72,600
90.	Television and radio service technicians	72,600
91.	Tool and die makers	72,600
92.	Bricklayers and stonemasons	71,500
● 93.	Hotel managers and assistants	71,500
94.	Pharmacists	71,500
● 95.	Public relations workers	71,500
96.	Chemists	70,400
97.	Flight attendants	70,400
98.	Dental hygienists	69,300
99.	Dentists	68,200
● 100.	Securities salesworkers	67,100
101.	Waste water treatment plant operators	67,100
102.	Recreation workers	64,900
103.	Appliance repairers	61,600
104.	Mail carriers	61,600
105.	Printing Press operators and assistants	61,600
106.	Truck mechanics and bus mechanics	61,600
107.	Barbers	61,050
● 108.	Automobile salesworkers	60,500
109.	Musicians	57,200
110.	Psychologists	57,200
111.	Meatcutters	55,000
112.	Production painters	55,000
113.	Roofers	55,000
114.	Stationary engineers	55,000
115.	Automobile body repairers	51,700
● 116.	Economists	51,700
● 117.	Collection workers	49,500
● 118.	Credit Managers	49,500
119.	Cement masons (cement and concrete finishers)	47,300
● 120.	Computer service technicians	47,300
121.	Lithographic workers	47,300
● 122.	Hotel front office clerks	46,750
● 123.	Reservation, ticket, and passenger agents	46,750
● 124.	Commercial artists	44,000
125.	Composing room workers	42,900
126.	Structural-ornamental- and reinforcing iron workers, rigger, and machine movers	42,900
127.	Millwrights	41,800
● 128.	Route drivers	40,700
129.	Speech pathologists and audiologists	40,700
130.	State police officers	39,600
131.	Surveyors	39,600
132.	Automobile parts counter workers	38,500
133.	Diesel mechanics	37,400
134.	Photographers	37,400
135.	Floral designers	36,300
136.	Photographic laboratory workers	36,300
137.	Airplane mechanics	35,200
138.	Dieticians	35,200
139.	Business machine repairers	34,100
140.	Architects	33,000
● 141.	Marketing research workers	33,000
142.	Central office craft occupations	31,900
143.	Local transit busdrivers	31,900
144.	Airplane pilots	30,800
145.	Boilermaking workers	29,700
146.	Farm equipment mechanics	29,700
147.	Operating room technicians	29,700
148.	Dental laboratory technicians	28,600
149.	Taxicab drivers	26,950
150.	Floor covering installers	26,400
151.	Physical therapists	25,400
152.	Singers	25,400
153.	Telephone and PBX installers and repairers	25,400
154.	Asbestos and insulation workers	25,300
155.	Display workers	24,200
156.	Newspaper reporters	24,200
157.	Boiler tenders	23,100
158.	Ophthalmic laboratory technicians	23,100
159.	Pest controllers	23,100
160.	Rehabilitation counselors,	23,100
161.	School counselors	22,550
162.	Sheet-metal workers	22,000
163.	Bookbinders and related workers	20,900
164.	Drywall installers and finishers	20,900
165.	Chemical engineers	20,350
166.	Optometric assistants	19,800
167.	Parking attendants	19,800
168.	Forge shop workers	19,250
169.	Construction inspectors (government)	18,700
170.	Physicists	18,700
171.	Dispensing opticians	17,[illegible]
172.	Interior designers	17,050
173.	Mathematicians	17,050
174.	Hotel housekeepers and assistants	15,950
175.	Veterinarians	15,950
176.	Funeral directors and embalmers	15,400
177.	Physical therapist assistants and aides	15,400
178.	Broadcast technicians	14,850
179.	Locomotive engineers	14,850
180.	Setup workers (machine tools)	14,850
181.	Geologists	14,300
182.	Historians	14,300
183.	Molders	14,300
184.	Shoe repairers	14,300
185.	Conductors	13,750
186.	Electroplaters	13,750
● 187.	Statisticians	13,750
188.	Chiropractors	13,200
189.	Furniture upholsterers	13,200
190.	Occupational therapy assistants	12,650
● 191.	Technical writers	12,650
192.	Aerospace engineers	12,100
193.	Medical record administrators	12,100
194.	Occupational safety and health workers	12,100
195.	Elevator constructors	11,550
196.	Track workers	11,550
197.	Electrocardiographic technicians	11,000
198.	Motion picture projectionists	11,000
199.	Occupational therapists	11,000
200.	Dancers	10,450
201.	Foresters	10,450
202.	Actors and Actresses	9,900
203.	Automobile painters	9,900
204.	Landscape architects	9,900
205.	Optometrists	9,900
206.	Intercity busdrivers	9,350
207.	Automobile service advisers	8,800
208.	Biochemists	8,800
209.	Central office equipment installers	8,800
210.	Models	8,800
211.	Watch repairers	8,250
212.	Air traffic controllers	8,250
213.	Jewelers	[illegible]
214.	Petroleum engineers	8,250
215.	Sociologists	8,250
● 216.	Actuaries	7,700
217.	Crane operators	7,700
218.	Urban planners	7,700
219.	Employment counselors	7,700
220.	Geographers	7,150
221.	Bellhops and bell captains	6,600
222.	Political scientists	6,600
223.	Radio and television announcers	6,600
224.	Vending machine mechanics	6,600
225.	Agricultural engineers	6,050
226.	Boat-motor mechanics	6,050
227.	Ceramic engineers	6,050
228.	[illegible]	6,050
229.	Metallurgical engineers	6,050
230.	Forestry technicians	5,500
231.	Glaziers	5,500
232.	Patternmakers	5,500
233.	Electric sign repairers	4,950
234.	Geophysicists	4,950
235.	Industrial designers	4,950
236.	Plasterers	4,950
237.	Locksmiths	4,400
238.	Podiatrists	4,400
239.	Electroencephalographic technicians	3,850
240.	Food scientists	3,850
241.	Mining engineers	3,850
242.	Piano and organ tuners and repairers	3,850
243.	Anthropologists	2,750
244.	College career planning and placement counselors	2,750
245.	Photoengravers	2,750
246.	Signal department workers	2,750
247.	Lathers	[illegible]
248.	Meteorologists	2,200
249.	Biomedical engineers	1,650
250.	Bowling-pin-machine mechanics	1,650
251.	City managers	1,650
252.	Instrument makers (mechanical)	1,650
253.	Line installer and cable splicers	1,650
254.	Merchant marine officers	1,650
255.	Range managers	1,650
256.	Oceanographers	1,100
257.	Blacksmiths	550
258.	Merchant marine sailors	550
259.	Astronomers	330
260.	Electrotypers and stereotypers	220

ESTIMATED EMPLOYMENT, SELECTED OCCUPATIONS, UNITED STATES, 1974

No.	Occupation	Estimated Employment 1974
1.	Secretaries and stenographers	3,300,000
2.	Retail trade salesworkers	2,800,000
3.	Building custodians	1,900,000
4.	Bookkeeping workers	1,700,000
5.	Local truckdrivers	1,600,000
6.	Blue-collar worker supervisors	1,460,000
7.	Kindergarten and elementary school teachers	1,276,000
8.	Private household workers	1,200,000
9.	Waiters and waitresses	1,180,000
10.	Assemblers	1,140,000
11.	Cashiers	1,111,000
12.	Secondary school teachers	1,086,000
13.	Carpenters	1,080,000
14.	Typists	1,000,000
15.	Nursing aides, orderlies, and attendants	970,000
16.	Cooks and chefs	955,000
17.	Construction workers	865,000
18.	Registered nurses	860,000
19.	Accountants	805,000
20.	Inspectors (manufacturing)	790,000
21.	Wholesale trade salesworkers	770,000
22.	Automobile mechanics	735,000
23.	Welders	645,000
24.	Machine tool operators	600,000
25.	Engineering and science technicians	560,000
26.	Long distance truckdrivers	540,000
27.	College and university teachers	527,000
28.	Bank clerks	[illegible]
29.	Computer operating personnel	[illegible]
30.	Cosmetologists	[illegible]
31.	Industrial machinery repairers	500,000
32.	Licensed practical nurses	495,000
33.	Stock clerks	490,000
34.	Police Officers	480,000
35.	Guards	475,000
36.	Insurance agents, brokers, and underwriters	470,000
37.	Painters and paperhangers	470,000
38.	Shipping and receiving clerks	465,000
39.	Receptionists	460,000
40.	Gasoline service station attendants	450,000
41.	Operating engineers (construction machinery operators)	400,000
42.	Real estate salesworkers and brokers	400,000
43.	Telephone operators	390,000
44.	Manufacturers' salesworkers	380,000
45.	Plumbers and pipefitters	375,000
46.	Dining room attendants and dishwashers	370,000
47.	Food counter workers	360,000
48.	Physicians and osteopathic physicians	350,000
49.	Power truck operators	347,000
50.	Lawyers	342,000
51.	All-round machinists	335,000
52.	Statistical clerks	325,000
53.	Personnel and labor relations workers	320,000
54.	Drafters	313,000
55.	Social workers	300,000
56.	Postal clerks	290,000
57.	Electrical engineers	290,000
58.	Maintenance electricians	280,000
59.	File clerks	275,000
60.	Bank tellers	270,000
61.	Mail carriers	267,000
62.	Electricians (construction)	245,000
63.	Bank officers	240,000
64.	Bartenders	230,000
65.	Firefighters	220,000
66.	Medical assistants	220,000
67.	Meatcutters	202,000
68.	Air-conditioning, refrigeration, and heating mechanics	200,000
69.	Programmers	200,000
70.	Stationary engineers	193,000
71.	Life scientists	190,000
72.	Route drivers	190,000
73.	Purchasing agents	189,000
74.	Mechanical engineers	185,000
75.	Protestant ministers	183,000
76.	Industrial engineers	180,000
77.	Medical laboratory workers	175,000
78.	Advertising workers	170,000
79.	Civil engineers	170,000
80.	Office machine operators	170,000
81.	Tool and die makers	170,000
82.	Bricklayers and stonemasons	165,000
83.	Composing room workers	165,000
84.	Health services administrators	150,000
85.	Automobile body repairers	145,000
86.	Printing Press operators and assistants	140,000
87.	Appliance repairers	135,000
88.	Chemists	135,000
89.	Library technicians and assistants	135,000
90.	Television and radio service technicians	135,000
91.	Truck mechanics and bus mechanics	135,000
92.	Airplane mechanics	130,000
93.	Automobile salesworkers	130,000
94.	Barbers	130,000
95.	Home economists	128,000
96.	Claim representatives	125,000
97.	Librarians	125,000
98.	Production painters	125,000
99.	Dental assistants	120,000
100.	Hotel managers and assistants	120,000
101.	Pharmacists	117,000
102.	Systems analysts	115,000
103.	Telephone and PBX installers and repairers	115,000
104.	Buyers	110,000
105.	Central office craft occupations	110,000
106.	Health and regulatory inspectors (government)	110,000
107.	Instrument repairers	110,000
108.	Dentists	105,000
109.	Public relations workers	100,000
110.	Securities salesworkers	100,000
111.	Diesel mechanics	95,000
112.	Millwrights	95,000
113.	Taxicab drivers	92,000
114.	Boiler tenders	90,000
115.	Cement masons (cement and concrete finishers)	90,000
116.	Roofers	90,000
117.	Floor covering installers	86,000
118.	Lithographic workers	85,000
119.	Musicians	85,000
120.	Structural-ornamental-and reinforcing ironworkers, riggers, and machine movers	85,000
121.	Radiologic (x-ray) technologists	82,000
122.	Photographers	80,000
123.	Airplane pilots	79,000
124.	Automobile parts counter workers	75,000
125.	Psychologists	75,000
126.	Shop trades	75,000
127.	Brake operators	73,000
128.	Economists	71,000
129.	Local transit bus drivers	71,000
130.	Social service aides	70,000
131.	Credit managers	66,000
132.	Business machine repairers	65,000
133.	Forge shop workers	65,000
134.	Recreation workers	65,000
135.	Sheet-metal workers	65,000
136.	Commercial artists	64,000
137.	Collection workers	63,000
138.	Waste water treatment plant operators	62,000
139.	Drywall installers and finishers	60,000
140.	Farm equipment mechanics	60,000
141.	Molders	60,000
142.	Roman Catholic priests	58,000
143.	Track workers	57,000
144.	Reservation, ticket, and passenger agents	56,000
145.	Line installers and cable splicers	55,000
146.	Surveyors	55,000
147.	Hotel front office clerks	54,000
148.	Medical record technicians and clerks	53,000
149.	Aerospace engineers	52,000
150.	Chemical engineers	50,000
151.	College student personnel workers	50,000
152.	Computer service technicians	50,000
153.	Photographic laboratory workers	50,000
154.	Setup workers (machine tools)	50,000
155.	Physicists	48,000
156.	State police officers	46,500
157.	Boilermaking workers	45,000
158.	Funeral directors and embalmers	45,000
159.	School counselors	44,000
160.	Parking attendants	42,000
161.	Flight attendants	41,000
162.	Architects	40,000
163.	Marble setters, tile setters, and terrazzo workers	40,000
164.	Mathematicians	40,000
165.	Newspaper reporters	40,000
166.	Conductors	39,500
167.	Respiratory therapy workers	38,000
168.	Locomotive engineers	37,000
169.	Singers	36,000
170.	Bookbinders and related workers	35,000
171.	Display workers	34,000
172.	Electroplaters	34,000
173.	Furniture upholsterers	34,000
174.	Interior designers	34,000
175.	Dieticians	33,000
176.	Floral designers	33,000
177.	Dental laboratory technicians	32,000
178.	Speech pathologists and audiologists	[illegible]
179.	Asbestos and insulation workers	30,000
180.	Central office equipment installers	30,000
181.	Shoe repairers	28,000
182.	Veterinarians	28,000
183.	Operating room technicians	28,000
184.	Pest controllers	27,000
185.	Historians	26,000
186.	Plasterers	26,000
187.	Automobile painters	25,000
188.	Intercity busdrivers	25,000
189.	Lathers	25,000
190.	Occupational safety and health workers	25,000
191.	Marketing research workers	25,000
192.	Coremakers	24,500
193.	Foresters	24,000
194.	Statisticians	24,000
195.	Vending machine mechanics	24,000
196.	Dental hygienists	23,000
197.	Geologists	23,000
198.	Air traffic controllers	22,000
199.	Broadcast technicians	22,000
200.	Construction inspectors (government)	22,000
201.	Ophthalmic laboratory technicians	22,000
202.	Industrial traffic managers	20,500
203.	Patternmakers	20,500
204.	Automobile service advisers	20,000
205.	Merchant marine sailors	20,000
206.	Physical therapists	20,000
207.	Technical writers	20,000
208.	Elevator constructors	19,000
209.	Optometrists	19,000
210.	Radio and television announcers	19,000
211.	Rehabilitation counselors	19,000
212.	Chiropractors	18,000
213.	Hotel housekeepers and assistants	18,000
214.	Jewelers	18,000
215.	Motion picture projectionists	18,000
216.	Bellhops and bell captains	17,000
217.	Dispensing opticians	[illegible]
218.	Metallurgical engineers	[illegible]
219.	Photoengravers	[illegible]
220.	Watch repairers	[illegible]
221.	Sociologists	[illegible]
222.	Urban planners	[illegible]
223.	Biochemists	12,400
224.	Agricultural engineers	12,000
225.	Ceramic engineers	12,000
226.	Landscape architects	12,000
227.	Medical record administrators	12,000
228.	Petroleum engineers	12,000
229.	Optometric assistants	11,900
230.	Political scientists	11,500
231.	Signal department workers	11,500
232.	Boat-motor mechanics	11,000
233.	Electrocardiographic technicians	11,000
234.	Motorcycle mechanics	11,000
235.	Telegraphers, telephoners, and tower operators	11,000
236.	Actuaries	10,700
237.	Forestry technicians	10,500
238.	Physical therapist assistants and aides	10,500
239.	Actors and actresses	10,000
240.	Industrial designers	10,000
241.	Occupational therapists	9,400
242.	Blacksmiths	9,300
243.	Electric sign repairers	9,000
244.	Geographers	9,000
245.	Glaziers	9,000
246.	Locksmiths	9,000
247.	Models	9,000
248.	FBI special agents	8,600
249.	Geophysicists	8,200
250.	Piano and organ tuners and repairers	8,000
251.	Occupational therapy assistants	[illegible]
[illegible]	Station agents	[illegible]
25[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible] scientists	[illegible]
256.	Dancers	[illegible]
257.	Employment counselors	7,000
258.	Meteorologists	5,600
259.	Instrument makers (mechanical)	5,500
260.	Bowling-pin-machine mechanics	5,000
261.	Mining engineers	5,000
262.	College career planning and placement counselors	4,100
263.	Electrotypers and stereotypers	4,000
264.	Rabbis	4,000
265.	Anthropologists	3,800
266.	Electroencephalographic technicians	3,800
267.	Biomedical engineers	3,000
268.	City managers	2,900
269.	Oceanographers	2,500
270.	Range managers	2,500
271.	Astronomers	2,000
272.	Interpreters	600

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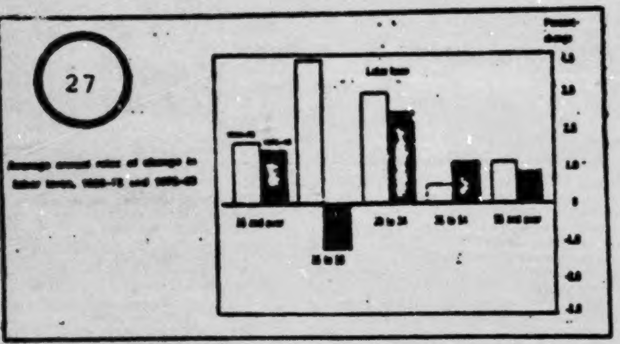

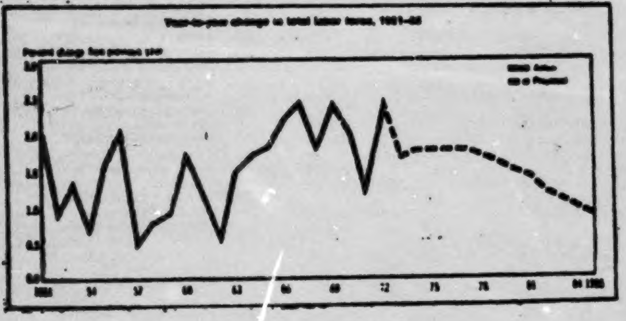

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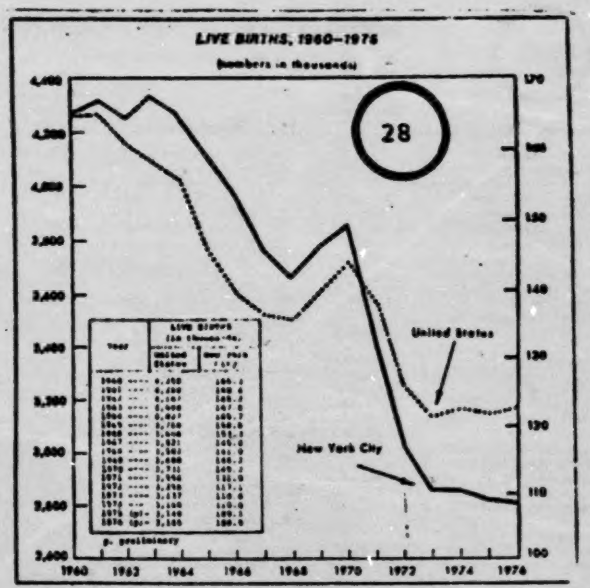

Source: Data for New York City are from the New York City Department of Health. United States data for 1961-74 are from the Department of Health, Education, and Welfare. United States data prior to 1961 are from the Bureau of the Census. Data for 1975-76 are provisional from the National Center for Health Statistics.

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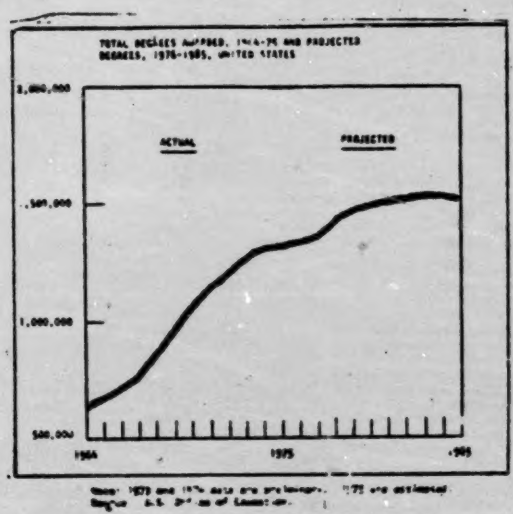

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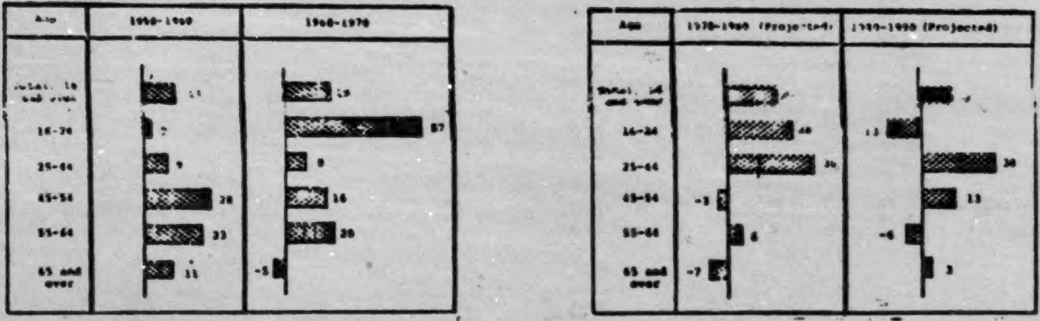
LABOR FORCE GROWTH BY AGE GROUPS IN THE UNITED STATES, 1950-1990



BUSINESS AND THE FUTURE: A VIEW OF THE POSSIBLE

by

Ian H. Wilson

Any speculation about the future of business and its environment would be well advised to use uncertainty as its starting point. About the only thing we can say with absolute certainty about tomorrow is that it will be vastly different from today. That is a true, but not very helpful, statement about the future. And the real objective of our speculation--as of business planning--must be to try to make some rather more precise statements about the nature and extent of tomorrow's differences.

Change is, of course, nothing new in the world of business. Fifteen years ago we started to hear, in the management rhetoric of the times, pronouncements about the "winds of change." Looking back at those times from our vantage point in 1977, we must think of those winds as gentle breezes compared with the gales that have subsequently ripped through our society. Certainly, when we then spoke of change, we did not have in mind some divisive and disruptive trends and events as campus and urban riots, Vietnam and Watergate, double-digit inflation and nearly comparable unemployment, energy crises and changing values, let alone the plethora of movements that the past fifteen years have spawned--the minority movement, the youth movement, the women's movement, the consumer movement and the environmental movement. Small wonder that we now find ourselves bruised and breathless, wary, even distrustful, bracing for the next blow, and with our confidence shaken in our leadership, in our institutions, and in ourselves.

In this crucible of change the essential character of management has been transformed: it has changed from administering continuity to managing uncertainty. We seem to be able to take fewer and fewer things for granted: the area of normalcy in our business lives seems to be progressively decreasing, while the area of discontinuity and risk is progressively increasing.

In the process, too, the essential character of the corporation is being transformed: it is changing from a private institution, judged against financial criteria, to a quasi-public institution that is being evaluated against a wide range of social and ethical, as well as economic, criteria. Nor should we find this so very surprising. A corporation is, after all, a social organization (by charter, it is a creation of society); and, as a microcosm of society, it must reflect all of that society's values--social, moral, political and legal, as well as economic. It must change as society changes; but, as a dynamic institution, it can also seek to influence the ultimate form and expression of these changes.

What, however, of the future? After these fifteen years of dramatic change, can we look forward to a period of stability and "normalcy"? What, in this era, should we consider "normalcy"? A broad-ranging General Electric study of future consumer markets is instructive in this regard. It noted that virtually all the major dynamics of the quarter-century-long, post-World War II period (1948-73) have now changed, or are in the process of changing, to be replaced by new dynamics of the next quarter century. The study revealed that, of the 30 dynamics of the earlier period:

- 6 were likely to continue in approximately their established form;
- 8 would experience relatively minor deflections from their past trajectories;
- but 16 (more than half) would undergo major inflections/discontinuities, including such significant determinants of the future business environment as:
  - population growth and distribution;
  - age mix, in the labor force and in the population at large;
  - growth rates for GNP and personal income;
  - inflation, and energy costs;
  - consumer values and lifestyles;
  - technology, including (in particular) the full flowering of the "electronics (information) revolution";
  - structure of manufacturing and retailing industries.

The overall impact of any one of these discontinuities on business would be pervasive: the combined effect of all of them justifies, I think, the term "radical," when considered over the next 20 years or so. Let me, however, focus in on the single element of changing value systems and try to trace out the multifold ways in which they are likely to shape the future business.

My starting point for this analysis is what I have termed the "New Reformation"--a re-formation, or re-ordering of individual and societal values. I have summarized these changes, not in terms of the greening of America no as the triumph of the counter-culture, but as rather more subtle, but nonetheless pronounced, shifts in the emphasis of our thinking:

- from considerations of quantity ("more"), toward considerations of quality ("better").
- from the concept of independence, toward the concept of interdependence (of nations, institutions, individuals, all natural species).
- from mastery over nature, toward living in harmony with it.
- from the primacy of technical efficiency, toward considerations of social justice and equity.
- from the dictates of organizational convenience, toward the aspirations of self-development in an organization's members.
- from authoritarianism and dogmatism, toward participation.
- from uniformity and centralization, toward diversity and pluralism.
- from the concept of work as hard, unavoidable, and a duty, toward work as purposive and self-fulfilling, and toward a recognition of leisure as a valid activity in its own right.
- from the satisfaction of private material needs, toward awareness of the need to attend to social wants.

The business impact of these shifts shows up in a "shaking of the seven pillars of business," those basic values that undergird our economic and business system--growth; technology; profit and the market system; private property; managerial authority; "hard work," or the Puritan work ethic; and "company loyalty." As with the broader societal shifts, so with these basic business values, it is more of a re-assessment and re-definition than an outright rejection of them that is taking place, a sort of "yes, but"-ing in each case.

To explain my meaning, I should like to examine the first two of these "pillars"--growth, and technology--in some detail, and then treat the others somewhat more briefly.

As to the first, the practical significance for business is to be found in changed perceptions about the nature, form and uses of economic growth that are *already* starting to influence public and private policy decisions in a way that cannot but impact directly and immediately, on corporate plans and operations. For evidence, we need only consider the following trends.

There is developing recognition that there must be *limits to exponential growth*, that there is validity to the concept of the S-curve in many important areas of economic growth. Even critics of Dennis Meadows' "Limits to Growth" are prepared to concede that infinite growth is not possible on a finite planet, with finite resources and space. The argument, then, is over the timing of equilibrium; and, clearly, it is of the utmost importance to policy makers to know whether the point of inflection on the S-curve is now, 50, 100 or 200 years away.

More immediately, at least in the United States, there appears to be a de facto recognition of the need to impose *limits to population growth*. Admittedly, forecasting population growth is a highly inexact science, and every Census Bureau forecast of the past 40 years has had to be revised within 10 or so years of its promulgation. However, it is a fact that the overall fertility rate has held below the replacement level (2.1) for five years; and that this result is influenced as much by new "quality of life" choices by young married couples as it is by improved birth control technology.

We have already, as a nation, made a commitment to specifying *limits to pollution growth*. Little more needs to be asid about this obvious point. No doubt, as Russell Train observed on assuming his position as head of the Environmental Protection Agency, "mid-course corrections will be made" as we gain better understanding of the costs and consequences of these statutes, or as we make new trade-off decisions in dealing with the development of new energy sources, at least on a short-term basis (e.g., the Alaska pipeline). But it is inconceivable that there would be a complete course reversal.

But public policy makers and business executives are beginning to act on the need to put *limits to growth in resource consumption* (particularly, of course, for nonrenewable resources). Kenneth

Boulding has written of our need to make the transition from a "cowboy economy" to a "spaceship economy"; and the progressive development (and financial attractiveness) of solid waste management technology surely heralds the end of a pure through-put system, and the advent of a recycling system.

Finally, evidence is accumulating daily of widespread decisions to impose some limits to capital growth. Many communities have followed the example of Boca Raton, Florida, Ramapo, NY, and Petaluma, CA, in setting a limit on their ultimate growth or on annual increments of new development. The power plant siting problem of electric utilities is well known. And new shopping centers, dams and highways are encountering a degree of local opposition that would have been unthinkable as recently as 10 years ago.

This brief litany of new "limits" is intended only to demonstrate the relevance of the growth debate to business decision-making, not to resolve the argument. This debate will continue and expand over the years, but it is already clear that developments far short of global equilibrium can have a strong effect on market size, production processes, plant siting, product mix and pricing, the development of new technologies, materials policies, and recycling/product disposal problems.

Turn now to the second "pillar"--technology"-- and the changing values pertaining to it. Probably nothing has been more characteristic of the U.S. economy in the past 50 years than the application of technolgoy to industrial systems and products. The general expectation is that it will continue to be a distinguishing characteristic of the post-industrial economy, so much so that Zbigniew Brzezinski coined the alternative term, "the technetronic age." However, almost certainly the future does not hold simply "more of the same" in this regard. One might say that the high-water mark of the "old" technology occurred in 1969 with the landing on the moon and the concurrent fact that millions around the world were able to watch it as it happened. Since that time, we have become convinced that nothing is now technically impossible ("If we can put a man on the moon, why can't we....?").

Yet, starting almost at the same time as this celebration of a supreme technical achievement, there has been, as never before, a widespread questioning of the nature, the value, and the extent of technological progress. At one level we are developing a greater awareness of some of the negative environmental and societal consequences of technical developments, and insisting that here, too, "better" replace "more" as our motto. At another level, there is the question, "Granted that we can do it (if not now, then later), do we have to do it? Does 'can' imply 'ought'?"--in effect substituting a moral imperative (or question) for a purely technological one.

Like growth, technology is not destined for the scrap heap of societal thinking. Even so strong a critic of the negative byproducts of unrestrained technology as Barry Commoner fully subscribes to the theory that "the answer to bad technology is not no technology, but good technology." But there can be little doubt that the parameters within which technology will be permitted to develop will be more circumscribed by considerations of its potential "negative externalities" and its longer-term second-and third-order consequences.

The five remaining "pillars" can, as I suggested earlier, be dealt with more briefly:

- Profit is being severely questioned as a statement of the purpose of business, and debates will continue to rage about the extent to which the profit motive can be squared with the need for business to assume additional measures of "social responsibility." It is highly probable that profit will remain as a means (a source of capital and of research fundint), a motivator (to spur the entrepreneurial spirit), and a measure (of both social and business success). But business in general, and individual companies in particular, will have to develop a more socially oriented statement of purpose and mission.
- The concept of private property is already being modified, both philosophically and practically. Donald S. MacNaughton, chairman of Prudential Insurance Company, has exposed the myth of the typical corporation being considered a "private property institution." It is indeed incongruous to seek in the notion of private property--which was, and still is, appropriate to the owner-manager form of business--the basis for the legitimacy and and rights of management of corporations.

At the same time that this conceptual question is being raised, new restrictions are being placed on untrammeled property rights as land use planning grows in state and community application.

- The legitimacy of managerial authority is being called into question, with demands for greater participation by employees and other corporate constituencies in the decision-making process. It may not be true that management rights will go the way of the divine right of kings in our lifetime, but there can be little doubt about the strong reaction to the authoritarian exercise of power, or about the widespread feeling among the public that they want more say in, more control over, decisions that affect their lives and work.
- The notion that "hard work" (in the sense of being done "in the sweat of thy face"--or, one might say today, in the numbness of thy mind!) is being put aside in favor of developing "meaningful work," responsive to an individual's interests and self-development needs. This is not the place to discuss the so-called "erosion of the Puritan ethic," but work values are changing as a better-educated, more affluent work force takes over. And it is unrealistic to expect that traditional methods of organizing work and motivating people can long continue to go unchanged.
- And, finally, the concept of "company loyalty" is being narrowed more and more, both by the realities of career mobility, and by the belief that any employee caught in conflict between loyalty to his company and the public interest should always reslove the conflict in favor of the latter.

Although I have been speaking in terms of changing values, I would not have you think that this is purely a matter of philosophical debate. I am suggesting that these shifts in beliefs, attitudes and behavior are the dynamics--not the only ones, to be sure, but important ones nevertheless--of corporate change. They give rise to a long series of issues whose resolution will be central to determining the future nature and role of corporations in our society. For instance:

- It is our re-examination of the role and nature of growth that lends impetus to a re-thinking of the trade-offs we are prepared to make between quantity and quality. The issues of job creation vs. environmental non-degradation and increasing energy supply vs. energy conservation are just two current examples of a broader phenomenon: that, at some critical point, increasing affluence has a feedback that tends to moderate its own growth, at least in material terms. From this same root spring the "second-generation" environmental issues of resource conservation, waste management and recycling, and land use planning. One might even argue that growth-management ideas are also at least a contributory factor in the onset of the national economic planning debate.

- Re-defining the parameters of technology makes it a reasonably safe bet that technology assessment--and the relative roles of the public and private sectors in that process--will be a rising issue of the 1980's. As something of a corollary to that, I believe that intermediate (or appropriate) technology is likely to be of increasing importance, both as a corporate strategy and as a matter of public debate. Of major concern in the technology area will be the issues of health and safety as they relate to corporate products, equipment and manufacturing processes. Clearly, we have seen only the tip of the iceberg so far on these issues.

- Third, the questioning of profit--no so much in terms of percentages, but as to its adequacy as a statement of business purpose--has already brought the issue of "corporate social responsibility" to the fore. This is, I know, a frustrating and amorphous issue to tackle: definitions and attitudes toward it are nearly as numerous as the individuals involved. However, one fixed point in this uncertainty is the growing convergence between ethical expectations and business performance. We should anticipate that corporations will be increasingly judged against moral criteria by the public, as well as against financial criteria by investors. We have seen this already on arms sales, "kickbacks," South Africa and the Arab boycott. there is no reason to doubt the growing pervasiveness of this issue of "explicit ethics" (if I may coin a term) into advertising, treatment of employees, customers and suppliers, product testing and so on.

- Doubts about the appropriateness of private property as a legitimizing concept for corporate management bring forward the issue of the governance of the corporation. If the corporation is not truly *private* property, then maybe (it is argued) it should be *publicly* accountable--and governed (?). From this reasoning the issues of corporate disclosure (in all its many forms) and of the proper role and composition of the board of directors emerge; and these lead, in turn, to the overall question of Federal chartering, part of whose thrust is directed toward the divestiture issue. After all, if there is some questioning about the validity of the market and private property concepts, the notion of determining market and corporate size and structure by means of some publicly (i.e. politically) determined criteria becomes more plausible.

- Fifth, debate about the proper nature and extent of managerial authority turns on issues of employee and community participation in corporate decisions. (In passing, it is worth observing that, at the same time we are trying to internalize externalities, we seem also to be moving toward externalizing internal decision-making.) The employee participation issue is much broader--and much deeper--than the Western European question of union representation on boards of directors. It is more a reflection of higher education than of greater unionization, and so affects a much larger segment of the work force. It is not merely a matter of "co-determination" at the policy level, but also--more probably, and more importantly--a more pervasive diffusion of decision-making authority on work-related matters. Beyond this lies the issue of "public participation." I am think here, no so much of legislative or regulatory restrictions on managerial decisions, but of active intervention in the decision-making process by a variety of corporate constituency or special interest groups (community representatives, consumers, environmentalists, etc.).

- Finally, beyond employee participation, there is a range of issues arising from the re-definition of "work" and "loyalty" concepts--the sixth and seventh "pillars." In a generic sense, these issues might be said to be concerned with the quality of the work environment, and to include such elements as:
    - the meaningfulness (or sense of purpose) in work;
    - the structure and scheduling of work;
    - an employees' "Bill or Rights";
    - privacy (though this is, or course, much broader than an employee issue);
    - "whistle-blowing";
    - productivity, with particular emphasis on motivation (as contrasted with capital, energy, R & D) as a major lever for improving the quality and the quantity of output.

These listings of changing values and emerging issues may suggest the possible course and impact of trends affecting the future business environment: they do not necessarily forecast outcomes. "Trend," after all, "is not destiny." Indeed, I would argue that a critical determinant of the buture of business is likely to be, no so much the trends themselves, but the nature of the business response to them. What strategy will most corporations adopt in the face of these trends? Will it be reactive? defensive? accommodative? pro-active?

In May, 1973, our Business Environment Studies component in General Electric developed four alternative scenarios--one for each of these possible strategies--in order to structure our speculation about the future of business. I reproduce (pages 39-40) summaries of two scenarios for 1973-1985--those for the polar extremes of reactive and pro-active strategy--exactly as they were written four years ago. (Though they might be sharpened and improved by a rewriting today, they still hold good as illustrations of possible futures.) While it is true that the future will not occur precisely as delineated in any scenario, these "imagings of the future" are nevertheless useful in suggesting the extent of the difference between possible outcomes.

At the outset I noted that my speculation on the future of business was going to be based on a single vector--changing value systems. This will be, I believe, an important determinant of the future (though it begs the question, "What causes values changes?"); and the analysis has provided important insight into future issues. However, I recognize that there are other "macrotrends" of major significance which I might have used to probe the future:

- I might, for instance, have used as my vector the emergence of the post-industrial society, about which Daniel Bell has written so eloquently. The phrase, "post-industrial," is now in such common usage that we are in danger of forgetting its real historical significance. The transition--from an industrial to a post-industrial society--is of a magnitude the like of which we have seen only a handful of times in the course of human history: once, when man the hunter and nomad became man the settled farmer; again, when civilization (literally, "living in cities") dawned; more recently, a hundred years ago in the U.S., when an agricultural society gave way to an industrial society. One major significance of the post-industrial transition for our purposes is the shift in our economic structure and employment from manufacturing to the services sector (government, education, finance, insurance, wholesale and retail trade, communications, travel, entertainment, health care, etc.) and the vast proliferation of alternative career opportunities that this shift opens up.

Scenario of a Reactive Business Response

"Beset by inflation, recession, shortages and a profit squeeze, and confronted by the recent spate of newly-legislated requirements (e.g., EEO, OSHA, product safety, pollution control), business opts for a policy of 'minimum feasible compliance.' Having no realistic option but to comply with the law, companies attempt to deal with the 'revolution of qualitative expectations' simply by adhering to the minimum requirements of new statutes. They challenge administrative interpretations of the law whenever possible, and resist pressures for new legislation wherever they develop.

"For a while the public, distracted by concern over rising prices, unemployment, and declining incomes, and disillusioned and distrustful in the post-Watergate climate, is content to see the assimilation and enforcement of 1970-1973 legislation. Meanwhile, however, the basic forces working toward a further shift in societal values continue to work their way through society, and a 'business-as-usual' attitude on the part of companies does little or nothing to deal with the developing challenge.

"The advent of the political year 1976, and the emergence of a younger, better educated and more aggressive work force and electorate set the stage for a new round of anti-business legislation. In particular, the perceived failure of business to deal adequately with the conflicting claims of the energy crisis and a clean environment leads to the introduction of bills, and the writing of planks in party platforms, to control business growth and investment, and to re-structure major industries. A change of Administration and continued business 'heel-dragging' ensure passage of many of these bills by 1978.

"At the same time, a basic inability to deal with the 'quality of work' expectations of the new work force leads to progressively declining morale and productivity, increasing unionization, alienation and 'whistle-blowing.' Business, suffering a crisis of confidence and failure of nerve, is by now in a virtual state of siege, harassed by government regulation, beset by boycotts and class-action suits, 'betrayed' by its employees, and obsessed with a 'fortress mentality.' All that remains is the final step of public control and take-over of major corporations."

Scenario of a Pro-Active Business Response

"Compliance with both the letter and the spirit of current laws, and the sponsorship of new legislation and public information programs, are only starting points in this strategy. These efforts are buttressed by the establishment and enforcement of standards and self-policing activities on such matters as advertising, consumer rights and product safety.

"The major emphasis, however, is not on the legislative/educative aspects, but rather on innovative approaches to corporate marketing, production and management policies that, over the next decade, lead to a sweeping reform of business relations with customers, employees, government and the public. The need for thorough-going revisions of many conventional methods and policies flows from an awareness that, in many instances (such as pollution abatement, conservation of energy/materials, product servicing, job re-structuring), a 'tinkering' or 'additive' approach is not only less effective, but also more costly in the long run.

"Progress, inevitably, is slow because of institutional inertia, costs and conflicting claims on management attention. But it is sufficiently noticeable that the gap between expectations and performance is kept manageable, and tension does not reach the breaking-point. Although corporate mistakes occur, and are well publicized, the public attitude toward them is marked by a greater degree of tolerance than in other scenarios. Penalties are imposed more selectively, and Congress is less apt to reach for 'shotgun' legislation. Such laws as are passed tend to embody and codify the best of current business practices.

"The value of a pro-active response becomes apparent, too, in the work force area. As the changing composition and wants/needs of the labor force reach critical levels in the latter half of the decade, the early experiments in job enlargement/flexible scheduling/participation start to pay rich dividends in enabling companies to attract and retain a committed and productive work force.

"Pressure from consumer, environmental and other interest groups continues to be a major factor, but a great openness in corporate communications (including more voluntary disclosure of corporate information) keeps this pressure at a low level of acrimony. In general, while there may be greater 'publicization' of the corporation than there was in 1970, there is markedly less 'politicization' of economic decision-making than in the other scenarios."

- Or I might have chosen to explore the implications of the increasing internationalization of business stemming from the growing economic interdependence of our world (not withstanding the counter-trends of political nationalism). It is not only the multinational corporation that will be affected: even companies that have not thought of themselves as international businesses will find themselves affected by competition from imported products, the cost and supply problems of imported energy and raw materials, the inflationary effects of world food and energy demands, currency revaluations and the like.
- Or I might have emphasized the impacts on work and organization structure of the electronics (information) revolution, as microprocessors, computers, interactive TV and cable systems are infused into more and more of our business operations.

All of these, and more, are valid perspectives on the future. Merely mentioning them serves to underscore the extent and pace of changes crowding in on the business scene.

If I were to be asked to summarize the emerging characteristics of business (especially the corporation), I would say that it is tending to become:

- more services-oriented;
- more international;
- more "public" in its operations (i.e. a less "private" organization);
- more "social goals oriented"--or, more accurately oriented toward different social goals (resulting from changing values);
- more selective in its growth strategies;
- more conservation/re-cycling oriented;
- more concerned with human resources;
- more decentralized in its operations and management system;
- more participative in its governance.

The fact remains, however, that we can never really know the future: uncertainty is the dominant factor with which we all must contend. What I have given is one view of the possible; but we must be prepared to think of, and plan for, alternative futures. If one thing is certain for the future of business, it is that the management of uncertainty, flexibility and contingency planning will be the cardinal rules for success (both personal and corporate).

THE FUTURE ENVIRONMENT FOR BUSINESS, EDUCATION, WORK AND LEISURE

by

Robert F. Bundy

While preparing for today's conference, my thoughts often went back to the 1960's when I was an employee of the Xerox Corporation in Rochester, New York. During my years with Xerox I was involved in research and development, sales and management training, marketing administration, and new product planning and market research in the Office of the President. Even now, I can remember vividly the interest with which management watched the changes taking place in (1) employer-employee relationships, (2) employee incentive programs and (3) attitudes toward work. Numerous predictions were made attempting to identify the most likely course the future would take in each of these and other related areas. And from these predictions we made our best estimates of the consequences to be expected for corporate policy, new products, R & D, marketing and the working environment.

Chris Argyris, Peter Drucker, Rensis Likert, Douglas McGregor, Warren Bennis and others greatly influenced and inspired our thinking. Business organizations, we were told, would become more flexible and democratic. Management would see its social responsibility for the quality of life as a basic part of its mission. Knowledge workers, rather than manual or craft based workers would become solidly entrenched in the new knowledge organizations as management's fundamental investment. New ways would be found to measure the output and profitability of knowledge work. Worker incentives would have to take into account that many employees at all levels of the organization would insist on job satisfaction and security, but at the same time would resist being "owned" or "run" by the organization. Other areas of life--education, recreation, leisure--would become equally as important or more important than jobs for many. Indeed, ones real work in life for a large percentage of workers would increasingly be found outside the job in those life spaces that the worker perceived would allow psychological/mental/spiritual growth.

The key employee of the future then was to be someone who: could systematically organize knowledge and use this knowledge systematically; seeks greater autonomy; has greater intellectual committment to tasks performed and seeks satisfactions intrinsic to these tasks; wants to participate in making decisions and setting goals; wants a performance oriented organization with more freedom to innovate and experiment; and wants demands made by knowledge and problems rather than superiors.

Looking back now I am struck at how accurate we were in some areas and how far off we were in others. Particularly striking is how little attention was really given to factors that now loom as all important, e.g. management's responsibility for the quality of life in terms of pollution, scarcity of resources and the other problems associated with economic growth; the rising power of women and minorities as well as the growth in economic and political influence by Third World countries.

The problem with many of our predictions was that we were too selective in the data and information we looked at; too caught up in the dream of social/scientific progress; too desirous of a particular kind of future we thought would be best for everyone. What we business planners didn't do often enough was look at those deeper underlying civilizational factors that might have given us warnings or pointed out areas we had better attend to. We also weren't humble enough in our demands that the world had to behave in a certain way and be amenable to our industrially oriented plans and designs. Perhaps we were most blind to the fact that our industrially oriented "lens," through which we looked at reality, was cracked and giving us false readings. We didn't know that this "lens" was fast clouding over and forecasting the kind of view necessary for understanding the way the world was changing.

Now in 1977, some 10 years after I left the business world to enter the field of education, I am, through this workshop, being asked to make some new forecasts about employee-employer relationships, the work ethic and employee incentive programs. Wisdom prompts me this time to go more slowly, to be more comprehensive in outlook, and to draw more deeply from the wealth of human experience in past societies.

Said differently, I feel the compelling need to be more concerned with the evolving ecological, social, political, economic and spiritual attitudes which will determine how people will work, learn and take their leisure in the future. Wisdom also prompts me to recognize that I have been away from active involvement in the business world for some time. This means I have probably lost certain immediate sensitivities and awarenesses about business and its current problems, and in these areas would have little to offer this assembled group. What I might be able to do however, is bring an outsiders view about global changes and the future that might offer another angle of vision to look at the issues important to this conference. By another angle of vision I mean changes in cultural perceptions that may significantly impact all cultural life and institutions.

In any event, in my attempt to heed all these admonitions and at the same time offer something of value to your deliberations, what I will do is sketch a picture of fundamental shifts in consciousness which seem to be taking place over the entire globe and specifically in Western civilization; and then speculate on where these shifts may be taking us. My primary concern will be the educated person of tomorrow and how this person looks at the world, because it is this person that business and all other institutions must depend on.

My principal arguments and conclusions will be the following. In each culture there is some generally accepted belief about what it means to be educated; some common understanding of the knowledge, attitudes and skills considered appropriate for life in a culture. This belief in turn shapes and guides the practices of formal education, business or otherwise. Ultimately, beliefs about what it means to be educated together with the resulting practices of formal education, can be traced back to whatever dominant vision of the future is held by a culture. This connection between schools and visions is true for Hopi Indians, Pakistani, Chinese or New Yorkers; in short, for every culture without exception. So important is this connection that when new visions in a culture replace the old, ideas about literacy, education and schools also change.

In Western Civilization there appears to be a rapid loss of faith in the vision of industrial progress that helped give birth to our particular idea of the educated person and our existing system of schools. The very issues that prompted this conference reflect this rapid loss of faith and in fact signal the decline of this once powerful vision of industrial progress. If these things are true then a radical transformation is already occurring in what we mean by an educated person and what kinds of schools are appropriate for the future. What this transformation will bring and what changes it will cause in our schools will be determined by the new vision that eventually replaces the old industrial dream. It is the nature of this new vision that I particularly want to explore with you because of its great positive, potential for the whole human race. In short, what I would like to share with you are ideas about the death of old dreams and the birth of new visions and what all this could mean in practical terms for education in general and business education in particular, business organizations and working climates, and the kind of person who will be entering and shaping business organizations over the next several decades.

These then are my conclusions and directions of thought. With all this as prologue let me begin my story by telling you about a personal experience which in itself is not world shattering but is indicative, I believe, of the shattering of an older way of looking at the world.

The Global Drama: Shifting Visions

During April of 1976 I was privileged to give the opening address at a two day conference on leisure held in Presque Isle, Maine. The entire conference was most enjoyable because of the many entertaining activities and opportunities for learning that had been built into the agenda. Scheduled workshops helped the participants explore the many historical meanings and experiences of leisure from the ancient Greeks to modern times. In between and after the workshops there was an on-going, informal flea market in which dozens of people from Maine displayed the kinds of things they do for leisure. At the end of that first day, most of us found ourselves sitting around singing into the early morning hours as two guitarists played the music of people like Paul Simon, Cat Stevens, Janis Ian and Neil Diamond.

For me, the day had ended much quieter and more harmonious than it had begun. You will readily understand what I mean when I explain that early that same morning I and some other travelers were blocked from boarding a plane at Boston Airport which was about to fly us to Presque Isle. The reason? A bomb threat made over the telephone by an anonymous caller. It will come as no surprise then if I report that late that evening as I reflected back on all that had happened that day, I was struck by the strangeness of our civilization.

At one point during the day I could have been killed while flying thousands of feet above the earth. Some hours later, in a city over 600 miles from where I had gotten out of bed that morning, I was in earnest discussion about the subtleties of Greek culture. And at still another part of the same day I was sitting around singing 20th Century ballads with a group of people I had just met and probably would not see again.

Granted my experience was atypical but it certainly wasn't unusual. Most people can easily find many days in their own experience that would match mine. The real strangeness of our civilization I concluded, is all the things we have come to accept as the everyday, the common, the usual in human affairs. The range of our normal experiences in one 24 hour period would have been largely unintelligible to earlier societies. Can there be any serious doubt then as we begin the final quarter of the 20th Century that something terribly profound is happening to the human race? That a decisive juncture point has been reached in the human drama?

But how shall we describe this great transition? Many social planners and futurists try to describe it in terms of changes in technology, economics, knowledge and a host of other factors. But while all these factors signal a radical departure from the familiar past, they are only symptomatic of much deeper cultural currents moving with great power through our historic period. The real transition I speak of is nothing less than a transformation of our very images of the future as a nation, a civilization, a global community and as a human race.

Fred Polak's[1] pioneering work on images of the future has helped us to understand the role images play in creating history. Images of the future are the clear, crystallized, focused expectations of what is to come. Images contain the sacred memories of a culture; those deeply held beliefs about God, the cosoms, the nation, human potential and history. Images may be positive or negative. If positive, they always speak about a better world in a coming time; a world that is far more preferable than the present.

Images may be religious, in the sense that the finger of God is believed to be guiding human affairs to some final conclusion; or images may be utopian in the sense that people consciously construct the good life here on earth. Or, images may be some combination of religious and utopian.

We don't know a great deal about images of the future and how they arise in a culture, but in every case they seem to come from the poets, mystics and visionaries of an age. Not all images, however, are destined to become a lived faith for the masses. Those that do take root in the consciousness of a people must be unique for the particular time period and cultural circumstances. Then, slowly over the generations and centuries the images are refined, added to, elaborated on.

How images are taught is another mysterious process. In general, we can say that images are transmitted from generation to generation by the telling of stories. Through the telling of stories the meanings contained in the images are revealed time and again to the people. No living faith within a culture therefore can be sustained without the stores that a culture tells about its beliefs and experiences. In sum, images of the future pull a culture foreard in time. They explain the past, inspire confidence in the present and instill hope that one day the promises contained in the images will be fulfilled.

Images of the future thus prefigure the actual future. Projected forward by a cultural consciousness, an image radiates its power backward in time to shape hopws and expectations in the present and to move a people toward the destiny foretold by the images. The history of a culture is a history of its images of the future. Images of the future are the actual prologue to all of history.

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[1] Fred Polak. The Image of the Future. Brussels, Elsevier, 1972. Also see Images of the Future by Robert Bundy, (ed.) Buffalo, New York: Prometeus Books, 1976.

Here we see the great dilemma of Western Civilization. In our times, older, once powerful images seem to be approaching exhaustion. These images are not dead because believers hang on and images do not die easily. But none of the older images seem to have the power to capture the social imagination in any collective sense. Instead, these older images fight one another and drain off each others energy and strength. Clearly what we lack is a larger dream that fits our particular historic period. As a result, world problems seem enormously complex and unable to be resolved. We seem powerless in the face of pollution, armaments buildup, population increases and new and bizarre technologies, particularly in the biological sciences. Fear and despair frequently become our companions as we face a world in which the present is bad but it is far better than the awesome and uncertain future. And so we are at one of those crucial points in history when older visions are passing away and the climate is right for the birth of new visions. And new visions there must be or our civilization will most assuredly take its place in the graveyard of history.

But also in this period, as our older images have become exhaused, something terribly significant has been happening to our ideas about literacy. And here we gain the clearest insight to our current confusion and malaise in education. The beliefs held about what it means to be an educated person are intimately tied to the dominant vision inherent in a culture. So true is this that it is difficult to imagine any culture surviving very long without a common literacy, a basic agreement on the kinds of knowledge, attitudes and skills necessary to maintain, protect and improve a culture. But when, as in our historic period, there is neither collective agreement on what the future will bring nor on which future we should be working toward, then there will be no agreement on the kinds of knowledge, attitudes and skills that will lead us forward. Thus, when new visions replace the old, ideas about literacy, education and schools also change.

Let me now put these ideas into perspective by giving a concrete example. A particular vision that has veen very powerful in the West for at least two centuries is the technological utopia or what some would call the superindustrial dream. We are rapidly losing faith in this vision with the result that many of our former ideas about education are losing their vitality and appeal. By superindustrial society I mean that logical extension of the idea of industrial progress; a world in which: (1) economic growth continues (perhaps reaching ten trillion dollars GNP by the year 2000). Industrial institutions and technologies spread to all the peoples of the earth. And rapid change continues to be a significant and pervasive phenomena in all aspects of life. (2) Power is centralized in huge institutions set up to carry out necessary social tasks. Most people spend most of their time in, interacting with our dependent on large institutions for jobs, mobility, education, health, recreation, and leisure. (3) Institutional dependence in a myriad of subtle but powerful ways thus becomes a key characteristic of life in the future. (4) Because of the complexity of both institutions and high energy technologies, most social, political and economic decisions affecting the masses of the people have to be made by highly trained experts and technicians. (5) A Mass consumption world prevails but unlike the industrial era, consumption of ideas and information now account for the bulk of the GNP. (6) Material affluence is unparalled as the traditional scourges of humanity: hunger, disease and illiteracy, are done away with by skillful management of the environment and applied technology. (7) Everywhere one turns, high energy technologies are there to do our work and provide endless opportunities for amusement and diversion. They touch every aspect of life from production of energy to transportation, to agribusiness to recreation and education. (8) For the first time in human history, more people are living in dense urban centers than in rural areas. And (9) The temporary society becomes a fact of existence for everyone; much temporariness in people, places and things; the throwaway mentality and the modular person characterize each culture.

This dream is declining because in its advanced form it is not a viable world wide possibility. There are insufficient resources, including capital, to ever satisfy the constantly expanding needs of the global institutions and high energy technologies. To pursue this dream will mean the gap between the rich and poor will widen and there will be continuous degradation of the environment. For a short while the superindustrial society might be possible for the wealthy minority of the world but it would lead eventually to worldwide instability and megadeaths. The central argument against this image of the future however, is not based on biospheric considerations. Even if we could go on endlessly polluting without serious consequence, such a dream would enslave people. Large institutions and high energy technologies would become ends in themselves with a life of their own. Instead of people caring for and depending on each other, people would become chronically dependent on these anonymous institutions and technologies. Their personal agency would be lost to the technicians. They would be alienated from each other and their environment and a devious kind of consumer hendonism would be substituted for personal freedom.

Truly, nevertheless, this vision was once powerful and many believed in it. Many still believe in it. If we look carefully at it I think we can see how our current system of schooling has its roots in this vision and how we are still educating people for this kind of future.[2] But if this vision is dying then a radical transformation is already occurring in what we mean by an educated person. What this transformation will bring and what changes it will cause in our organizations and schools will be determined by the new vision that eventually replaces the superindustrial dream. And what might this new vision be? I don't believe we can know our visions in advance because they seem to reach out and possess us rather than our rationally choosing them. Still, perhaps, we can see the vague outlines of the new vision or at least strong evidence such a vision is emerging to guide the human family. Let me suggest five areas in which I think this evidence is abundant.

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[2] For a further clarification of this point see "Social Visions and Educational Futures," by Robert Bundy. PHI DELTA KAPPAN, September 1976, pp. 84-90.

Evidence for an Emerging Vision

1. Global Interdependencies. We need not dwell long here. The manifold ways all social, political, economic and ecological systems on the planet interpenetrate and depend on one another have been much discussed and written about. When the events of the smallest state can send out shock waves that affect the entire world; when uses of technology can impact the whole human community in the span of a few years and sometimes in a few seconds--then there can be no doubt about the interdependencies among all the peoples of the worlds; the fact that our social and psychic bonds are rapidly converging and tightening and time and space separations are collapsing. Likewise, there can be no doubt that the welfare of every part of the fuman family is intimately tied to the welfare of every other part. Triage thus is simply a ghastly joke flowing from a perverted superindustrial consciousness, much as if the hand were to cut off the foot because the hand didn't feel there would be enough nourishment to go around. We may live at the monent in a lawless global arenda but the need for global security structures is clear evidence how all human relationships are drawing together.[3]

Similarly, not long ago, most people would have had great difficulty seeing any connection between an oil blowout in the North Atlantic and the general health of protoplankton off the Fiji Islands; the pumping of industrial effluents into New York coastal waters and the making of weather over Pakistan. Accurately explaining these connections would still be a problem for most people, but the awareness that the connections are important is slowly becoming entrenched in our imagination. Gradually the awareness is spreading that the planet with its thin biosphere is like a living organism in which every part touches and depends on every other part; in which there are flows and patterns across a hugh ecological nervous system. To touch or disturb any part of this nervous system therefore is to touch and affect every other part. In short, we are learning that nature is alive and sensitive, not just some neutral, dead thing for us to conquer and exploit in our ignorance.

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[3] For an excellent discussion of this point see Toward a Human World Order, by Gerald and Patricia Mische, New York: Paulist Press, 1977.

This awakening to how our systems, biospheric and social, interpenetrate, will have profound effects eventually on how we visualize ourselves, what we respond to in our environment, how we design our buildings, organizations and life spaces, and take our leisure. As nature becomes a holy place again and flowing information systems link people everywhere--we are being led to generate new images of human nature, human potential and human purpose.

2. Desire for Smallness. Underlying this trend, which is strongest just now in the West but is slowly becoming worldwide, is the growing realization that our huge education, business, military and government organizations are not meeting minimum human needs nor providing the range of human services they promised. Nor will these organizations be able to unless they undergo a massive scaling down, decentralization and redirection. Thus, in the future, people everywhere are going to have to learn now to care for and depend on each other again and to do things more simply and less expensively just to survive and obtain ordinary human services. Initially, the strength underlying this trend will be economic as greater numbers of people discover they cannot afford to buy the products and services provided by our current models of law, medicine, education, transportation and so on. These are the most expensive models the world has ever known and we ourselves in the economically rich nations cannot afford them any longer.

This growing desire for smallness cuts across every aspect of our cultural life from the kinds of technologies we use, to the institutions that serve our needs, to the life spaces and human relationships that nourish us. As our social, technical tools change to reflect this desire, our images of ourselves will also change.

3. Synergy of Eastern Mysticism with Western Pragmatism. Allowing for a lot of oversimplification, there seems to be much truth in characterizing certain aspects of Eastern mysticism as having become too ethereal and other worldly; too distant from the din of the market and the turmoil of the political form. At the same time, only traces of mysticism have survived the emergence of rational, economic man in the West. As our global interdependencies increase it appears the East is being forced to discover again the importance of being properly

grounded and active in this reality, while the West is being forced to search for a larger purpose and vision--a reason to go on living beyond mere increases in GNP, more production and new ways to "conquer" nature. This new synergy will in time produce vibrant energy centers for creative problem solving and lead to new conceptualizations of human potential and human interaction.

4. Search for New Models of Hapiness. This trend is being expressed right now, particularly in the West, through the many humanistic/religious movements such as pentacostalism, ecumenism, experimental congregations, charismatic experiences, Zen, Yoga, Sufi, Arica, EST, T.M., psychic healing, Sylva Mind Control and so on. Despite certain excesses and abuses I believe that underlying each of these approaches is a deep desire to reject Madison Avenue definitions of hapiness and to expand awareness levels to include the psychic and mystical. In the United States alone it is significant that several million people have already participated in some formal way with one or more of these movements. During the coming decades I believe this kind of searching will intensify and some magnificent illuminations about human potential will occur. Actually, these illuminations are already happening as a result of exciting new syntheses of knowledge in progress.

5. New Syntheses of Knowledge. By new syntheses of knowledge I mean such things as: (a) recent research into plant life demonstrating that the continuity of life forces among living things is far more subtle, profound and beautiful than anything we have imagined to date.[4] (b) A growing recognition that we each have colored auras surrounding our body whose purpose is to communicate basic information as well as reflect our moods, emotions and health.[5] (c) A much greater acceptance of all kinds of psychic phenomena in the everyday lives of people. Unknown to the general public there are now many scientists

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[4] For a popular explanation of this see Peter Tompkins and Christopher Bird, The Secret Life of Plants. New York: Avon Books, 1973.

[5] For a summary of the work of the two Russina scientists in this area see The Kirlian Aura, Stanley Krippner and Daniel Rubin (eds.) New York: Anchor Books, 1974.

around the world who are trying to find new paradigms for understanding what is obviously a coming syntheses between physics, mysticism and the paranormal.[6] (d) Alternative forms of healing to Western medicine including psychic healing, homoepathic remedies, Bach remedies, acupuncture, acupressure, sonopuncture, color therapy, radiesthesia, and magnetic healing. These and other therapies in many instances are centuries old and well proven for their validity. However, they are little known in the West because of the monopoly exerted by standard medicine and the large drug companies.[7]

All of the above taken together suggest changes that are going to have the most profound effects on our world views and values, the way we define problems and visualize our potential, and the ways we create relationships with our social/technical tools. More and more people are going to discover the deep and abiding harmonies of the universe; the incredible powers for human development that are at our disposal; that in the main we have taken a negative and pessimistic view of human nature. We are, in short, on the verge of a Copernican revolution in consciousness that could truly lead to a new age; to a whole new vision on starship earth. We can't define this vision in advance but I believe we can see its general outlines and feel the movement of its energy. What future historians may label this vision is unimportant to us now. I call it the Aquarian Vision. Perhaps the astrological implications of Aquarius will bother or confuse some people. To me, the Aquarian Age symbolizes the ending of a superindustrial consciousness and the beginning of a whole new centrality of values in human affairs.

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[6] For example, Arthur Koestler, The Roots of Coincidence, New York: Vintage Books, 1973; Lawrence Leshan, The Medium, The Mystic and the Physicist. New York: Viking, 1974. Bob Toben, Space, Time and Beyond. Toronto, Canada: Clarke, Irwin & COmpany Limited and New York: E.P. Dutton and Co., Inc. 1974. Also, Fritjof Capra, The Tao of Physics. Berkeley, California: Shambhala Publications, Inc. 1975.

[7] Three useful books in the area of healing are: Ivan Illich: Medical Nemesis. New York: Random House, 1976. Brian Inglis, The Case for Unorthodox Medicine. New York: G.P. Putnam's Sons, 1964. Irving Oyle, The Healing Mind. Millbrae, California: Celestial Arts, 1975.

In my view, this age is not fixed in advance or foreordained in some cosmic sense. Rather, for many reasons, historical and otherwise, I believe the potential for an Aquarian Age is open to us and for awhile we will have the opportunity to actualize it. Part of the power inherent in this opportunity is not that everyone will become a mystic but that the evolution of human consciousness nevertheless can be accelerated greatly during the coming decades.

Looking Through an Aquarian Lens: World Affairs and Literacy

Let us ask at this point what an Aquarian lens would show about the future that the old industrial lens would not have presented to us. If an Aquarian Age evolves I believe, among other things, it would mean: (1) A breaking up of large power centers as they are currently represented in the huge transnational corporations. In their place would come non-profit, global security structures whose purposes are to arbitrate conflict and promote global cooperation and social justice. (2) Smaller corporations as basic units of production would inevitably dominate the economic scene. Similarly, smaller but largely self-sufficient regions would emerge around the earth; regions that enjoy amicable relationships with each other; and much information transfer takes place between regions. (3) These changes would certainly be accompanied by a movement away from the superindustrial growth ethic, excessive materialism, and "high energy" attitudes and tools. There would be much less replacement of meaningful human labor by high energy tools. Instead, there would be a major dependence on low energy or intermediate technologies. Cottage industries and craft-based economic systems would be at least as equally honored as industrial systems. For those regions that chose a more industrial approach, certain technologies would, in any event, be automatically eliminated such as super tankers, nuclear generating plants and strip mining. The relationships between people and their social/technical tools would be "convivial" in the sense Ivan Illich uses this term.[8]

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[8] Ivan Illich, Tools for Conviviality. New York: Harper & Row Publishers, 1973.

An Aquarian Vision is not anti-technology, anti-institutional, nor does it seek to go back to some earlier pre-industrial society. Technology will still be of great importance but the kinds of tools and the consciousness that uses these tools will be different. It its simplest terms, the industrial era represents a particular kind of experiment with technology in which we believed technological slaves could replace enduring human functions. An Aquarian consciousness sees the folly in this and offers yet another kind of experiment with technology--one in which social/technical tools are kept within safe limits; in which personal creativity and the enduring kinds of things people have always done for each other are greatly enhanced.

But now, still looking through our Aquarian lens, what might we see and say about the educated person or the literacy appropriate for an Aquarian Age. What I will do is suggest some areas in which I believe people will need to be literate for the future. These areas will not be in any particular order nor will there by any attempt to define a curriculum. Rather, I will simply present some ideas about literacy I feel are consistent with an Aquarian Age. In concluding I will make a few specific connections with the literate business person of tomorrow.

1. Low Energy Tools. I believe no one should graduate from high school without an intimate knowledge of windmills, solar cells, fish farms, methang generators, composting toilets and the other low energy tools that can be used for food and energy production. These tools are relatively inexpensive, can be made widely available, are easy to share, repair and use, are safe, non-violent to the environment and encourage decentralized, self-sufficient systems. These tools provide excellent opportunities to teach math, history and other academic knowledge as well as cooperation, problem solving and decision making. But there is an even further incentive. As I mentioned earlier we cannot afford our current model of school much longer which means we are going to have to find much simpler, less expensive ways of teaching people in the future. I have advised many school administrators, teachers and parents that if they seriously encouraged involvement with the low energy tools, a school could in a couple years be producing 1/3 or more of the electrical energy it uses through windmills build by the

students themselves. A school could also produce all of the food it needs by summer gardens, greenhouses and fish farms.

There are many additional kinds of low energy tools that would be useful in other areas of living. In health care, the literate person of the future will have a working knowledge of alternative therapies, a thorough understanding of the body and how it works, and be able to use methodologies as disparite as taking blood pressure, bio-feedback to control internal processes, examination of auras, and meditation to reduce pain or hasten healing. It will be a common experience for literate perople to responsibly share and teach one another about the tools of healing. The same will be true for the tools of learning. In short, being able to use low energy tools in all aspects of life will be an important part of literacy for the future. It will also be important in a business sense because of the many new employment opportunities that are likely to spring up around the low energy technologies.

2. People Loyalties. Helping people to emphasize loyalties to each other more than to large institutions will be a fundamental part of Aquarian literacy. This means bringing back a lot of old fashioned virtues such as honesty, integrity, faithfulness, keeping promises, cooperation, trust; the belief that enduring human functions cannot be given over to huge technologies and anonymous institutions without destroying the life of a culture.

3. Desire to Personally Make. People cannot be totally self-relient but they can want to personally make or do rather than have a constant reliance on the prepackaged services of huge institutions. I mean here an instinctive, habitual attitude in which ones first response when a need presents itself is to ask what one can do or make to satisfy that need. Certainly this implies a value system in all areas of life in which there is less acceptance of giving oneself over to the expert's decision and less use of the ready made professional service versus what people can do for themselves.

4. New Reality Constructs. Alvin Toffler is wrong, I believe, when he speaks of our information and decision overloads. It is not an overload we have but confusion in trying to process 20th century

information through reality constructs out of the 18th and 19th centuries. We need new constructs to understand our world on the eve of the 21st Century. What will they be? Spaceship earth? Planetary citizenship? Bioenergy? (a more basic form of energy that accounts for both physical and psychic phenomena.) The development and teaching of these new constructs is probably the most exciting area in education today.

5. Self-defined Work. I believe it is important to help people understand that ones work to do in life is a personal space in which one tests oneself and discovers an area of competency; in which a sense of judgment, style and craft can be exercised; in which one produces something more enduring, something to be used rather than used up. A work to do is also something that can't be completed in less than a lifetime. On the other hand, a job is simply how you earn money. Ideally, both job and work will be the same. Most crucial however is to have a work to do in life even if one has many jobs or none at various times.

6. Leisure as the Center of Life. To the classical mind the pur- or end of work was to enter into leisure. To the superindustrial mind, the purpose of leisure is to enter into work, or perhaps more accurately, job. In the ancient world, leisure was an attitude of mind independent of time; the doing of something for its own sake; a kind of detachment that allowed one to see deeper orders of harmony because one was not enslaved by the world. Leisure, in effect, said something about your whole life and character. By contrast, to the modern mind, leisure is what one does in some time block away from job. Not surprisingly then, but sadly, we hear educators say we need to help young people learn to use their "leisure time productively." Small wonder then there is so much disease in our civilization because productivity and amusement are substituted for authentic leisure. Leisure in the Aquarian Age will mean understanding that leisure is the center of life, the very basis of culture and it is only when one is in leisure that the most profound truths can be seen.

7. The Capacity to be Centered. The great thinkers of Western Civilization always understood there were two ways to know: (1) discursive reasoning in which one slowly, indirectly, categorized, analyzed, compared, abstracted and went from premise to conclusion. (2) a direct, immediate perception of the thing known beyond intellect and reasoning; what we call religious inspiration or creative flashes. In the superindustrial consciousness inordinate weight is placed on rational ways to know. In the Aquarian Age, rationality will still be important but it will be complemented by ones intuitive faculties. Important training will thus be to help people quiet the intellect and open up to ones inner self; a development of the poetic and irrational ways of knowing. In short, we need to help people learn to meditate--to be centered.

8. Unity of All Reality. This capacity to be centered is also crucial to helping people see the unity of all reality; how all things are connected and interrelated. A literate person in the Aquarian Age would readily understand what Francis Thompson meant when he spoke of how a falling leaf touches a distant star.

9. Long Term Perspectives. It is only by these capacities that young people are going to be able to bring long term social, economic, environmental and spiritual perspectives to personal and social decision making. In an Aquarian Age gone will be the short term gains and crass situational ethics of a superindustrial world view.

10. Openness to New Revelation. And finally, it will be important for people to understand there is an ongoing revelation about the ultimate questions of human existence. This means at a minimum level being open to the new paradigms and syntheses of knowledge taking place and where these might lead us.

Perhaps though touched on only briefly, these are suggestive of the many kinds of knowledge, attitudes and skills that will be part of the new literacy for an Aquarian Age. I have purposely not mentioned reading, writing or math or other areas of cognitive learning--not because they will be unimportant, but rather because I wanted to heighten these over dimensions of literacy for the future.

Conclusion: Some Notes About the Literate Person Needed for Tomorrow's Business Organization.

Let me close now by summarizing what I have tried to share with you and what the implications may be for business education, work and employee-employer relationships. The superindustrial dream is dying and with it many of our traditional notions of what literacy signifies and what it means to be educated. (The older dream, let us remember, was a noble venture and one that had many elements and accomplishments of which we can be proud.) In its place, I believe a new vision is slowly emerging even though it may be accompanied by much strife and uncertainty. I have called this new vision the Aquarian Age. This age symbolizes a whole new centrality of values in human affairs on a global scale and a major step forward in human consciousness--all pinting toward a new definition of literacy.

While we cannot know our visions in advance, we can, I feel, see their vague outlines or at least evidence that a new vision may be emerging. The characteristics of this new vision for our times seem to be: an expanded awareness, oneness of all reality, cooperation, social justice, peace, flowing information networks linking people everywhere, synergy between Eastern modes of consciousness and Western pragmatism, a desire for smallness in all aspects of life, and exciting new syntheses of knowledge bringing together modern physics, mysticism, the paranormal and healing--all leading to new paradigms and thought models we can only dimly perceive now.

The implications of all this for business management, business educators and everyone interested in preparing people for business careers, are that there are some very specific knowledge, attitudes and skills we need to help people develop now for life in general and specifically for life in the business climate of this new age. Some of these skills we can probably do within our existing schools and programs and organizations. The real challenge however is to explore more fully this new literacy and the new models of education and training needed for tomorrow.

As we pursue this challenge I believe we will discover the educated person of tomorrow will be a rather unique kind of person in the history of human affairs; not a saint by any means because certainly some of the cussedness of human nature will still be with us, but someone much more in harmony with themselves, their fellow human beings, their natural environment and their psychic/mystical capacities. Knowledge workers we will need but not people who feel they are superior to craft-based or manual based workers; nor will we need knowledge workers trapped in their own rationality who cannot release and use their intuitive faculties. Yes, the literate person of an Aquarian Age will seek greater autonomy but not the kind of autonomy that comes from rugged individualism or excessive competitiveness; rather from being a part of a caring community. Of course, intellectual commitment to tasks performed and the seeking of satisfactions intrinsic to these tasks will be important, but at the same time there is needed a more well developed moral consciousness; people less drawn by desire for power and wealth; in short, people who can wisely use power and wealth without lusting for either one.

Certainly the educated person of tomorrow will want to participate in making decisions, will want a performance oriented organization in which he or she can innovate, and will want demands made by problems rather than autocratic superiors. But to all these we must add a sense of constraint--just because something can be done in science and technology or social engineering doesn't mean it should be done; an openness to the arts and all expressive modes of communication; a capacity that permits one at times to just be with the world in awe and wonder, with no agenda, no plan or purpose

In essence, this kind of educated person is quite different from the person that evolved out of our superindustrial consciousness. As has been said before, a nation that hates war will never find peace. Because we hate war we spend over 100 billion dollars each year on military programs, and we develop ever more insidious ways to kill. Only a nation that loves peace will find peace. The same applies to people. The literate person for the Aquarian Age will be a lover of peace not a hater of war, poverty, inefficiency or the other things we learned to hate in the superindustrial consciousness.

Perhaps the most exciting thing is that becoming this new educated person is not reserved for future generations or young people. It is open to everyone of us here in this room this very minute if we choose it and are willing to open ourselves up to its possibilities.

THE FUTURE OF COMPUTERS AND BUSINESS EQUIPMENT

by

V. E. Henriques

I. Nature of the Change

A. The change will be evolutionary rather than revolutionary because of the capital implications in new products and because of the societal implications in adaptations to new methods.

B. The change will be purposeful rather than random, being driven by perceived need rather than technological opportunism.

C. The change will result from choice in a free market interaction rather than the dictate of a central authority.

D. The change will be dramatic because of the investment per worker potentials. Under current costs, capital investment per factory worker is in the $50,000 - $70,000 per capita range, whereas office workers are capitalized between $1,500 and $2,000. In the future, as the price performance ratios improve, more productivity can be achieved for smaller investments, which will drive the decisions for new equipment replacements.

II. Areas of Change in Data Processing (Including Examples)

A. Data Capture. Point-of-transaction terminals, electronic fund transfer systems, pattern recognition, magnetic recording and optical character recognition.

B. Data Recording. Magnetic surfaces, microimaging, analog and optical recording devices.

C. Data Storage. Magnetic memories, chemical memories, holograms, microimage libraries.

D. Data Manipulation. Distributed systems, free-standing mini- and microcomputers, large-scale dial-up computational facilities, improved software.

E. Data Display and Reproduction. Facsimile systems, cathode-ray tubes, holographics.

F. Data Communication. Communication satellites, lasers, fiber optics, cables.

SUMMARY

The variety and richness of technological innovation open the choices in all areas of data processing to tailor equipment to specific application needs, making it easier for the user to interact with the system and placing the technological innovations into every facet of society, home, education and economics.

III. Systems Considerations. Technological innovation forces the following systems considerations to be encompassed.

A. Local or remote operations.

B. Interactive systems with large hosts and remote terminals.

C. Networked computer systems.

D. Software sophistication.

E. Hierarchical data processing systems (tagged transactions and segmented files).

SUMMARY

Systems structure, protocols for interaction between levels within ystems, standards for data representation, documentation, software and systems operations, and regulation of public networks are prime systems considerations in order to accommodate the different types of system configurations and operating styles.

IV. Societal Considerations.

A. Job content and satisfaction.

B. Personal role (actual and perceived).

C. Interresponsibility in business environment.

D. Discipline versus innovation.

E. Behavioral modification in new organizational milieu.

CONCLUSION

The educational requirements to prepare for the future of computers and business equipment suggest that systems concepts, logic, verbal expression and completeness are the most important elements in preparation to work with the new equipments. While some hands-on training may be important, the older practice of rote learning and manual dexterity are not so important as the functional understanding and the ability to adapt to changing configurations and job requirements. The emphasis should be that teaching methods are examples and not standards.

THE OUTLOOK FOR BUSINESS EDUCATION IN NEW YORK STATE: DEMOGRAPHIC AND ECONOMIC FACTORS

by

Emanuel Tobier

This group is concerned with business education training at the secondary school level in New York State. My assignment today--as I interpret it--is to analyze, from an economist's point of view, the nature of the market for this activity over the next five to ten year period. When an economist talks about a "market," essentially he is talking about the factors and forces that influence the supply of and the demand for a particular commodity or service. In this case, then, the purpose of my brief remarks is to provide those who plan for and operate New York State's secondary school program of business education with an economic framework for understanding some of the major forces impacting the supply of and the demand for young people--of high school age--who will either, in the course of the next decade, be seeking business education and training or will be sought for because of such training.

Before getting on to my analysis of the major forces operating on the demand and supply sides, respectively, of this particular market, it would be useful to stress the interrelatedness of these two sets of forces: to stress the importance of feedback between the two. The level of demand for entry level employees with high school level business training over the next decade or so will naturally depend on trends in the demand on the part of business and governmental units for employees with such skills and on how much of this demand is registered by employers located within New York State. While young people can and do migrate to other parts of the country or world to seek their fortune, their entry into the world of work is obviously greatly facilitated if their first full-time jobs are available in the communities in which they have grown up and become educated. This is especially the case among young people whose formal full-time education terminates with the high school or community college diploma. Clearly the state of the state's economy--that is, the supply of jobs which are available to absorb these young entrants into the full-time labor force--will depend upon a great many factors over which the educational system itself has little or no control. But certainly a well thought through business education program can represent a distinct asset to efforts aimed at retaining and expanding economic activity within the state, since such programs influence the supply side via its effects on labor productivity in a critical sector of the state's overall economy, the field of white collar work.

In coming to grips with supply considerations--that is, with the numbers of high school age children who will be enrolling in business training courses--one useful place to begin is with a consideration of recent trends in the size and composition of New York State's population. As Table 1 shows New York State is, quite clearly, a slow growing place in population terms. Between 1960 and 1965 New York State's overall population rose by 6%; in the next five year period by 3%; and, from 1970 to 1975, it declined by 1%. While there was also a deceleration in the rate of growth in the U.S.'s population during this period, this was much more marked in New York State's case. As a result New York State's share of the U.S.'s population fell from 9.4% to 8.5% between 1960 and 1975. As Table 1 also shows, this pattern--of slowing growth, then, in some instances, of absolute decline --affected each of the state's metropolitan areas, and not just the New York Metropolitan Area.

There are two immediate reasons for the emergence of this pervasive demographic pattern, although they are themselves, in an important sense, the symptomatic outcomes of much larger social and economic forces: declining fertility rates and increasing out-migration.

Demographers who in the mid-1960's had occasion to view the population future of New York State expected a sharp increas to occur in the number of births during the ensuing decade and, as a corollary of this, a substantial increase in the absolute (and relative) importance of the state's youthful age cohorts. This forecast in turn was based upon certain expectations held about the behavior of the large number of persons, born in the decade and a half or so after World War II who were coming of age beginning with the mid-1960's and forming independent households. If these had married and had begun to have children at the same rate as their counterparts in earlier generations there certainly would have been an appreciable and sustained increase in the annual number of births over the entire 1965-75 period as well as a cumulative buildup in the number of pre-school and elementary school-age children in the state. However, this did not come to pass for the simple reasons that the fertility rate which had characterized young women during the period since World War II turned precipitately downward beginning with the mid-1960's. Thus, the total births to New York State residents fell from 321,000 in 1966 to 236,000 in 1975, a decline of 26%. And, reflecting this, between 1970 and 1976 the number of persons under 14 years of age residing in New York State fell from 4.5 million to 3.9 million, a 15% drop.

The impact of this decline in the number of births has not as yet been felt by the state's high school system, although it has obviously been reflected in its elementary schools: between 1970 and 1976 the number of 5 to 13 year olds in New York State fell by 12%. The number of 14 to 17 year olds living in the state rose by 4% between 1970 and 1976, reflecting the higher number of births during the period between 1955 and 1965. But clearly the state's high school age population is about to enter a period of significant absolute decline which should extend at the very least into the first half of the 1980's. What are the implications of this shrinkage in the overall size of the high school population for the supply of candidates for business education training? To some extent, this negative factor should be offset by the ongoing shift in the nature of employment opportunities, both in New York State and throughout the nation. The growth in job opportunities, as I shall presently discuss, is going to be concentrated in the white collar and service occupations for which business education programs at the high school provide one important entry point. Offsetting this advantage, however, is the equally clear cut tendency for a growing proportion of high school students to graduate and go on to college. It is difficult to forecast the net result of these conflicting tendencies. But on balance it seems clear that there will be many fewer young people enrolled in business education courses during the next decade that there were in the preceding one. While many would view this as an adverse factor--as it must be looked upon in sheer workload terms--it might also be turned to advantage as an opportunity to upgrade the nature of the training which is being provided.

The other principal factor which is influencing the near-term trend in New York State's population at the present time is migration. In my given period of time there is always a substantial movement of persons moving into New York State from residences in other parts of the country (or world) as there is of persons moving from the state to take up residence elsewhere. The offsetting results of these opposing flows is what demographers have in mind when they calculate net migration. Between 1960 and 1970 there were somewhat more people moving from New York State than there were people moving into it, and as a result there was a net out-migration of 101,000 people from the state during this period. The average annual rate of net out-migration thus far in the 1970's has soared compared to its 1960's performance (from 10,000 on an average annual basis during the 1960-1970 period to 125,000 from 1970-76). The increase in the rate of net out-migration in the 1970's has been due mainly to a decline in the rate of in-movement. But there has also been a substantial increase in the rate of out-movement.

By itself, changes in the rates of migration, such as the state has been experiencing, has little direct immediate impact on the high school age population. This is because migration of the sort that I have been describing is dominated by young adults--high school graduates at the very least by then--and by older people who have retired from the active labor force. Households who have children in high school or about to enter high school in the next few years are the least likely to move from the state or to it. Obviously, though, in the long run the sustained and substantial net out-migration of young adults from the state will have a depressing effect on the size of its high school age population. But this will not begin to manifest itself as a major factor until the latter part of the 1980's decade. Part of the recent decline in the state's birth rate can be attributed to the heavy rate of out-migration by young adults. This outflow reflects their reaction to the ongoing adverse changes in the state's overall economy, particularly since the latter part of the 1960's. To the extent that employment grows more rapidly in other parts of the country, we can expect New York State's young people--particularly its educated young--to shift their residences accordingly.

While the negative impact of a lower fertility rate will not make itself felt on the high school age population for a few years, it has already had a positive impact on the number of young women in the labor force. Young women are marrying later and having children later and having fewer children at that. Better educated to begin with, the character of their commitment to the world of work is much stronger than it was for their counterparts earlier on in the post-World War II period. In fact, there is an increasing tendency for women to stay in the labor force even when they have young children. Thus an increasing proportion of women are no longer in the labor force for a short period of time, to be interrupted by a much longer period of marriage and child-raising, only to return to work when their youngest child has reached a point where their presence at home on a full-time basis is no longer required. One clear consequence of these changing social patterns is that entry level jobs which were typically held by women will have to be enriched to reflect this factor and so will the nature of their prior training.

When one turns to examine the demand for entry level employees with business education training in New York State, two factors present themselves for immediate consideration. One is the lagging rate of growth in the state's employment opportunities relative to that of the nation. The other is the sharp relative shift within what is overall generally a pretty static employment picture from blue to white collar employment.

Between 1969 and 1976, total wage and salary employment, according to the U.S. Bureau of Labor Statistics, in New York State fell by 6%, from 7.2 million on an average annual basis at the outset of the period to 6.8 million at its conclusion. During this same period, U.S. employment rose by just under 13%. If one separates New York State into two parts, New York City and "the rest of the state," a somewhat different picture emerges. Employment in New York City fell by 15% while that in the rest of the state actually advanced by 5%. In 1969 there were more jobs inside New York City than there were in the rest of the state. By 1976 this situation had been reversed and by a wide margin at that.

New York State's rate of employment growth has slowed drastically since 1969. From 1960 to 1969, a period of rapid economic growth at the national level, employment in New York State increased at an average annual rate of 110,000 per year. Since 1969 it has declined at an average annual rate of 60,000 a year.

To what extent have alterations in national growth patterns affected the economy of New York State? Since the early 1950's, the national economy has undergone three distinct phases. Table 2 compares these three time periods with regard to growth in real GNP, total employment, and unemployment. The period between 1953 and 1960 was one of moderate growth in real gross national product and was marked by frequent, if shallow, downturns. By contrast, the 1960-69 period was one of rapid and sustained expansion. At the national level, employment increased at an average annual rate of 572,000 from 1953 to 1960. But during the next nine years it soared at an annual rate of 1.8 million.

Since 1969, the national economy has reentered a period of relatively slow and erratic growth. The average annual rate of growth in real GNP between 1969 and 1973, two peak business cycle years, was well below that recorded in the 1953-60 and 1960-69 periods. The national economy contracted sharply between 1973 and 1975, and, since then, a recovery has been under way. But it will take an improbably strong upswing during the current phase of the revival to bring the overall post-69 national economic growth rate to the point where it matches its 1960-69 performance.

The impact of these three different periods of national growth on New York State's economy can be traced with the employment figures in Table 3. There was very little change in New York State's total employment between 1953 and 1960. During this period, New York City's employment fluctuated in a relatively narrow range of between 3.5 - 3.6 million and, overall, increased by a scant 14,000 jobs. Employment in the rest of the state grew in a much more substantial fashion during this period, advancing by 232,000 (or 10%).

Contrastingly, the period between 1960 and 1969 was one of very significant expansion in New York State's employment base. New York City's total employment rose from 3.5 million in 1960 to 3.8 million in 1969. Within this overall period, however, the city's employment advanced much more briskly in the period after 1964 than it did in the earlier portion. Of the city's net increase in employment of 260,000 between 1960 and 1969, 92% fell between 1964 and 1969. This pattern of quickening growth during the 1960's was repeated in the remainder of the state.

Much of the explanation for the vastly improved performance of New York's economy--in New York City as well as elsewhere in the State--during this period lies in the concurrent performance of the national economy. But it is also clear that the impact of the national boom during the 1960's took some time to make itself fully felt in New York. National economic expansion had been in virtually uninterrupted progress for nearly a half a decade before it began to be reflected locally in a significant pickup in the tempo of expansion in employment within New York City. As by the mid-1960's the national economy began to press against the limits of its productive capacity, parts of the country, like the New York area which up until then, had been growing slowly, if at all, suddenly began to experience quickened rates of economic and employment growth. This lag was most marked in New York City but it was also evident in its surrounding region as well.

The length and magnitude of the national economic boom between 1960 and 1969 reflected a unique combination of circumstances, notably the mid-decade superimposition of the production requirements of an expanded Vietnam conflict on an already straining civilian economy (all without the benefit of a tax increase). This expansion had already achieved substantial proportions by 1965, but in an unprecedented fashion it succeeded in prolonging itself and went on before ending in 1969 to achieve the longest period of sustained real growth in the post-World War II period.

Analysts and, more importantly, investors, viewing the state's future in the late 1960's saw much to bolster their confidence. New York City's overall economy was doing well. Nationally, white collar employment was expanding rapidly and Manhattan's Central Business District seemed to provide an especially congenial environment for this activity. It was true that the city's manufacturing sector continued to decline but the conventional wisdom was that this was part of an inevitable and largely beneficial transformation in the city's economic base. Moreover, at the time, there was a perceptible slowing down in the contraction of manufacturing jobs within the city. This development, coupled with an increased rate of expansion of manufacturing in the rest of the state, seemed to offer a longer transition period within which alternative work or income opportunities could be found for those people who were displaced by the decline in the blue collar sector. In retrospect, the expansion in manufacturing jobs outside of the city proved to be transitory in nature. A good part of it represented the spillover effects on the State's economy created by the national expansion in durable goods employment due to the heightened production requirements of the Vietnam War.

Unfortunately, post-1969 trends within New York State have not lived up to this earlier optimism. Neither the city's nor the state's economy has responded to the long-term trends and the short-term fluctuations in national economic activity since 1969 in a way that was congruent with their reactions to similar changes in the earlier part of the post-World War II period. The downward trend in employment in New York City since 1969 has persisted through all phases of the national business cycle: throughthe brief but sharp 1969-70 recession; the longer but shallow 1970-75 upturn; the unprecedentedly severe 1973-75 contraction; and finally, the post-1975 revival.

Total employment in New York State had declined in each year since 1969. It was only toward the end of 1976 that there was any sign of stability in the total level of employment. Not only has the decline in manufacturing employment within New York City accelerated once again since 1969, but, more seriously, these losses are no longer being offset by gains in nonmanufacturing employment. During the 1969-76 period, total nonmanufacturing employment fell by 224,000 and private nonmanufacturing employment fell by 249,000. Until 1975, the only source of employment growth was provided by local government. Disturbingly, the absence of growth in New York City itself is no longer being fully offset by growth elsewhere in the state. Between 1969 and 1976, when employment in New York City fell by over 500,000, there was a net increase of only 156,000 jobs in the rest of the state.

In this respect, New York State shares a common fate with areas throughout the northeastern part of the United States. The redistribution of population and economic activity within the United States from the metropolitan areas in the northeast to the newer metropolitan areas of the south and west reflects the operation of forces that are that are not likely to be reversed within the foreseeable future. These include changes in the technological basis of industry--which affect locational propensities of white collar as well as blue collar work--and also changes in the residential preferences of an increasingly affluent and mobile population. The slippage being experienced by the northeastern part of the United States in its share of national employment and economic activity is not entirely new. But earlier in the post-World War II period, New York State was able to increase the absolute size of its employment and population bases because, despite the slippage in relative shares, there was sufficient growth in the nation so that some of it spilled over into the state as well. Thus, what matters for New York State is not just changes in its share of the national total but the absolute amount of national economic activity. When national growth is curtailed to the extent that it has since 1969, this means that there is less to go around and, in this situation, a decline in relative share turns into an absolute decline.

Thus, the total level of employment in New York State is unlikely to advance very rapidly during the next decade or so. However it can be expected to continue to shift very rapidly as it has been doing for some time now from blue collar occupations which are concentrated in manufacturing, to those which require white collar skills and educational backgrounds. Compared to the nation, New York State ranks well above average with respect to the proportion of its employed labor force in white collar occupations.

In 1975, not quite half of the U.S. labor force was engaged in white collar occupations. The comparable figure for New York State was 55.6%. Among 26 large states, only one--Maryland--had a higher proportion in white collar work as of 1975 than New York State.

The growth in the number of white collar jobs in the state can be expected to advance rapidly over the next decade. According to the Bureau of Labor Statistics' projections of the U.S. economy, white collar employment is forecast to rise by 28% between 1974 and 1985 while total employment is expected to grow by only 20%.* The BLS foresees the fastest white collar sectors as being the highly educated professional and technical worker group (up by 30%) and the clerical worker contingent (up by 34%).

Employment of clerical workers--and the content of these jobs--will be greatly affected by developments in computers, office equipment and communications devices. The use of computers will retard employment growth in some clerical occupations and increase it in others. Growth in the employment of file clerks and office machine operators, for example, will be limited as computers are used more extensively to arrange, store and transmit information. At the same time, employment of computer and peripheral equipment operators is expected to increase substantially. Obviously, many types of clerical workers--who constitute one of the principal vocational constituencies of secondary school business educators--are unlikely to be affected significantly by technological developments. For example, secretaries, typists and receptionists whose jobs involve a high degree of personal contact should not be greatly affected. However, it seems clear that the typical clerical worker will be employing much more sophisticated and costly equipment in his work than has been the case in the past.

The importance of providing young people entering the white collar labor force with useful skills of the sort that can be transmitted through a well run business education program is obviously great in the kind of economic environment that is developing within New York State. What distinguishes this state's white collar sector is not just its great size in numerical terms but the composition of its activities. Largely because of the nature of New York City's economic base, New York State's white collar workforce has national and worldwide significance. While the cutting edge of this group is its highly trained and educated people, who are obviously not within the jurisdiction of the state's entry level business education program, this group needs to be supported, if it is to remain a viable operation within New York State, by a well trained and efficient clerical workforce, a significant portion of whose members are capable of upward movement within the career ladders of individual organizations.

The importance of net growth as a source of entry level employment opportunities within an economy as mature as that of New York State is relatively minor compared to that represented by job vacancies which result from labor force separations (retirement and deaths) and transfers to other occupations. Nationally two thirds of the job openings in white collar occupations that are expected to develop between 1974 and 1985, according to the BLS projections, are to replace workers who have, for one reason or another, withdrawn from the labor force. In New York State, the replacement share will be even higher.

TABLE 1

POPULATION TRENDS IN NEW YORK STATE BY METROPOLITAN AREA, 1960-75

	POPULATION (000)				PERCENT CHANGE		
SMSA	April 1960	July 1965	April 1970	July 1975	1960-1965	1965-1970	1970-1975
Albany- Troy- Schenectady	715	748	779	798	4.6	4.1	2.4
Binghamton*	251	265	269	267	5.6	1.5	-0.7
Buffalo	1307	1327	1350	1327	1.5	1.7	-1.7
Elmira	99	102	102	100	3.0	-	-2.0
Nassau-Suffolk*	1967	2321	2556	2657	18.0	10.1	4.0
New York,N.Y.	8760	9098	9077	8680	3.9	-0.2	-4.4
Poughkeepsie	176	202	222	235	14.8	9.9	5.9
Rochester	800	879	961	972	9.9	9.3	1.1
Syracuse	564	608	637	648	7.8	4.8	1.7
Utica- Rome	330	340	341	334	3.0	0.3	-2.1
State Total	16782	17927	18241	18075	6.8	1.8	-0.9

Source: U.S. Census Bureau

* Includes only N.Y. State Counties

TABLE 2

Average Rates of Change in Constant Dollar GNP, Unemployment Rate and Consumer Price Index for U.S. in Selected Periods, 1953 - 1976.

	Average Annual Percent Change Constant Dollar GNP*	Average Annual Unemployment Rate**	Average Annual Percent Change in Consumer Price Index***
1953 - 60	2.5	4.9	1.5
1961 - 69	4.5	4.7	2.4
1961 - 65	4.8	5.5	1.3
1966 - 69	4.1	3.7	3.9
1970 - 76	2.1	6.1	6.4

* In 1958 dollars

** Total civilian labor force

*** All commodities; 1968 = 100

Source: U.S. Bureau of Labor Statistics, U.S. Department of Commerce.

Table 3

TRENDS IN EMPLOYMENT, U.S., NEW YORK STATE, NEW YORK CITY, AND "REST OF STATE" BY TYPE OF EMPLOYMENT, 1953-1976

		NY STATE		
	U.S.	TOTAL	N.Y.C.	REST OF STATE
		TOTAL EMPLOYMENT (000)		
1953	50232	5936	3524	2412
1960	54234	6182	3538	2644
1961	54042	6158	3527	2631
1969	70442	7182	3798	3384
1970	70920	7155	3745	3410
1976	79443	6764	3224	3540
		MFG EMPLOYMENT (000)		
1953	17549	2119	1066	1053
1960	16796	1879	947	932
1961	16326	1823	914	909
1969	20167	1871	826	1045
1970	19349	1761	766	995
1976	18956	1427	528	899
		NON MFG EMPLOYMENT (000)		
1953	32683	3817	2458	1359
1960	37438	4303	2591	1712
1961	37716	4335	2613	1722
1969	50275	5311	2972	2339
1970	51571	5394	2979	2415
1976	60487	5337	2696	2641

Source: U.S. Bureau of Labor Statistics

SOME CONCERNS ABOUT BUSINESS EDUCATION

by

Victor Van Hook

The State of New York and City University of New York are to be congratulated on their vision in holding this session. I feel very humble in being invited to participate in this activity. You have always established patterns that eventually spread across the Alleghenies and the Mississippi River into our western states. Perhaps by being a part of this exercise, it will be possible to accelerate that dissemination so that your friends in Oklahoma can be aware of the results at a much earlier time. I am here to learn and will be interested in final results of your activity.

There are numerous problems facing all of education today, and many of the problems are directly or indirectly related to business education, It will not be possible to discuss all of the problems facing business education, so let me discuss some areas that seem to be of primary importance. My remarks today will deal with the problems of semantics, influence of legislation, salary levels, size of community, articulation, including career education, and curriculum.

Semantics: What is business education? To the business teacher educator, it is that body of knowledge which is presented to prospective teachers which hopefully will result in their becoming more effective teachers in the field of business. To many business teachers it is typing, shorthand, bookkeeping, or some combination of these with a lesser degree of attention to some peripheral areas such as consumer education, general business, business law, etc. To many school administrators, it is a place to put the non-college found female. To many students it represents an opportunity for a backup position or for upward mobility.

How does "business education" differ from "business and office education"? That is the crux of the semantics problem. External to the field, there is little or no difference. School administrators, parents, students, and the business community know of no difference unless those internal to the field attempt to verbalize a difference.

Internally, many business educators have identified business and office education as those areas that participate in Federal funding. Thus, business education is those areas that do not receive Federal funding.

Semantics have caused business educators to be bothered with tunnel vision. We have tended to take a very narrow view of the role we plan. We have paid lip service to a role much broader than that we are ready to implement. We have allowed ourselves or forced ourselves into compartments which have reduced the significance of the role we can and should play. We have dissipated and are continuing to dissipate our efforts because of internal problems. This leads logically into the next area I would like to discuss.

Influence of Legislation. Let's go back to the last century. Business education was not a part of public education. It started as an apprentice operation and dealt primarily with the keeping of financial records and writing communications. As business and industry replaced agriculture as a major employment area, the necessity for increased numbers of workers to attend to communications and finance become apparent. Because of the strong feeling of the need for a liberal education, public education failed to address the problem and the private sector took over. Private schools were established whose primary function was to provide this labor force. As taxpayers began to recognize the fact that this type of activity might be offered through public education, public pressure forced the incorporation of certain content into school curriculum.

Although business education had its beginning as vocational education, when it became a part of the secondary school and collegiate programs, many business educators began a job of making it a part of academia. There seemed to be a significant amount of active opposition to being classified as vocational educaton. Although there was some attention given to including business education as a part of the Smith-Hughes Act of 1917, insufficient thrust was given and it was left out. It was not until 1936 that any element of business education became a part of the Federal legislation, and this resulted in the first major split in the field. Business educators, in general, failed to support a move to incorporate distribution in Federal legislation which resulted in distributive education being formed as a separate unit in many school settings.

Enrollments in business education grew, but the emphasis shifted from a predominantly male field in the nineteenth century to a predominantly female field during the twentieth century. Many students came directly from high schools into jobs in business and industry. The education scene remained relatively calm with business education remaining somewhat in a twilight zone between academic education and vocational education.

A number of leading business educators assumed an active role with the President's panel of consultants in 1962 and were able for the first time to get business education listed as a component of vocational education in the Vocational Education Act of 1963. This has been viewed with mixed emotions by business educators. Strong emphasis was placed on the word "office" in the term "business and office education," and only special programs aimed specifically at certain job descriptions were anointed. In many school settings the "haves," those receiving special funding, and the "have nots," assumed adversary positions. The pattern closely paralleled the activity involving the split off of distributive education in the late 1930's and early 1940's. Separate business education associations became common at the State level and this projected upward to the National level in terms of professional associations. A new division, business and office education, was formed in the American Vocational Association; and teachers, teacher-educators, and administrators faced the dilemma of what to join. During the past 14 years, business educators have failed to get their act together; and as a result, the controversy continues.

While we have continued this in-house battle, some significant activities have occurred. We have seen a role with which we have considerable background taken over by another field of service. Although we can and should play a significant role in the development and projection of economic understanding, we have seen home economics assuming the leadership by mandate from Washington. We have much to learn from many other fields of service, but let me discuss only two--home economics and industrial arts.

Home economics education has many things in common with business education. I shall dwell on only one aspect of commonality and this is in their definition of the field. They admit that their programs are oriented in two directions--useful and gainful. They have been so successful in selling this definition as to gain acceptance of a 90-10 split. At least 10 percent must be spent in the area of gainful home economics. It is doubtful that anyone would argue with a similar approach for business education but with figures of at least 75-25 or possibly even 50-50. We need to get our act together.

Industrial arts pulled off a real legislative coup during the last session when they got attention for programs clearly defined as other than vocational education. The language reads "Industrial arts programs which will assist in meeting the purposes of the Act." The key words are "will assist." This is a role which business education can play with some changes in content. Typewriting is already accepted as being a communications tool beneficial to all students. Bookkeeping could serve a similar purpose if we could develop content for the non-office student. Portions of other courses--business law, business machines, business math, etc.--have uses that are considerably more universal than the narrow field of the office. This leads logically into a discussion of curriculum.

Antiquated Curriculums. For too many years, the business education curriculum in too many schools has remained constant. The base has been formed by typewriting, shorthand, and bookkeeping--one or two years of each depending on size of school and teacher attitude--and an occasional venture into business law, business English, business machines, general business, consumer economics, etc. Large numbers of business teachers have been taught to teach typing, shorthand, and bookkeeping; and because of their prior experience through teacher education programs, they feel confortable with these offerings. These have been, are, and for the immediate future will continue to be the core of business education.

What causes curriculum change? Most changes occur not because of what students what to know or what students need to know or what business and industry would like to have but rather because of what teachers want to teach. In the field of typewriting, two years of typewriting seems to be common with the second year reserved primarily for those who become proficient in the first year. The textbook publishers have done an excellent job of developing base and support materials for the classroom; but business educators have tended to view these as the Bible rather than as a guide.

Probably the most antiquated area is in the field of bookkeeping. In his "Survey of Entry-Level Bookkeeping Activities in Relation to the High School Bookkeeping Curriculum," Leonard West summarized his study by stating, "Provide a high school bookkeeping curriculum more closely attuned to entry-level job duties. Leave to job experience and later schooling the functions they are better able to serve." Depth of bookkeeping, according to the study, should in no case extend beyond the trial balance. The focus should be on initial entry without all of the intricacies of financial statements which seemed to be the province of experienced employees. Although West's study dealt with bookkeeping as training for the potential office worker, this type of approach might make the area more palatable to the non-office worker needing bookkeeping for increased functional effectiveness. Those individuals in other areas, particularly the skilled trades, needing some bookkeeping skills might relate to this approach.

In the Southwest we find many schools offering typewriting and shorthand as completely separate courses. It is not unusual to find all of the typewriters in the typing room with little or no access to those machines by shorthand students. Many students complete only one year of shorthand had have not had access to typewriters at any time during the year.

One of the most serious obstacles to curriculum revision is the Carnegie unit. It is my opinion that there is no magic in the number "175," yet most courses are structured to use that number of hours regardless of the material to be offered. Just as students are forced to accommodate themselves to the curriculum rather than adjusting curriculum to meet student needs, so are courses developed to accomodate the Carnegie unit rather than courses being developed to accomplish particular purposes. Business education is one of the worst offenders, if not the worst, in this almost fanatical adherence to the Carnegie unit. The laundry list of various courses available is unbelieveably long. Many options are available for structuring a program where little help is given by business faculty and guidance staff in developing an organized sequence.

What can we do? Outside the field of typewriting, we are reaching a relatively small percentage of students in secondary schools. I am a believer in modular scheduling but am well aware of the administrative headaches connected with such an approach. When schools get ready to expand their curriculums, they have to make decisions. Should we offer general business or consumers economics? Should we offer business machines or business math? Should we offer business English or introduction to data processing? Modular scheduling of perhaps one-fourth of a Carnegie unit would allow a much wider exposure. Since we only have modular scheduling in isolated instances, what are other alternatives?

Meetings such as this are equipped to exercise some vision. What would we like to have freshmen in high school know about business and business education? Forget about course titles, textbook content, what you learned in teacher education. For lack of a better term, let's call it Business Education I. Could we get a lot of general business, some business law, some business math, some business English, some consumer economics--the list is long--into such a program? Could we build a strong case for mass enrollments in such a program? Where might we go from there?

Let's take a look at Business Education II. What might be the content of such a course? How about typewriting for everyone, recordkeeping for everyone, and business machines for everyone, as a type of nucleus. This portion of the total program would relate to the skills areas needed by everyone for functional effectiveness.

As we move into the third level, consideration should be given to two major divisions--Business Education IIIA for the business education major and Business Education IIIB for the non-business major. Business Education IIIA might be a block-time program carrying two units of credit. The approach in this program would be in the direction of development of basic skills, thus it might be necessary to sub-divide in school systems with several business teachers into stenographic, accounting, general office, data processing, graphics, etc. Business Education IIIB might carry only one unit and would deal with such areas as small business bookkeeping, inventory control, finance, and management. This might be an option at either the junior or the senior year.

To complete the sequence, Business Education IV might round out the program. The emphasis here would be for business education majors and would emphasize the refinement of skills development in IIIA and would have a significant emphasis on on-the-job training, where possible, or simulation where training stations might not be readily available.

These suggestions would create some difficulty in the field becuase of some deep feelings that exist about certain courses. We have been guilty of creating confusion in the mind of administrators by not having any recognized body of knowledge that had any degree of acceptance. Too many business educators have had no contact with business students until the junior year, and too few students have had the opportunity to participate in a sequentially planned program. The major plea I make to you is that you give attention to development of a program that is sequentially organized, easily understood, and has the possibility of addressing the needs of students and the business community.

Size of Community. The size of the community has frequently worked to the detriment of students in the small high schools. Teachers in that situation have found it necessary to pick and choose as to what would be offered. Large communities have had less of a problem because of having an instructional staff large enough to widen the offerings. Any program developed should have either built in devices for accommodating different sizes of school environments or should have separate programs developed for the different sizes of schools.

Salary Levels. There is much evidence to support the claim that many top students are not appealed to by the business education curriculum. There is evidence that many business education classes appear to be the dumping ground for less able students. Perhaps this can be viewed as flattering to the field in that administrative staffs and counselors feel that there may be something in the content of the business education curriculum or in the makeup of business educators that will allow the student to profit from the experience. Business educators have had a growing concern because of the lack of attraction of top students to the field. Perhaps one of the reasons for this lack of attraction is the salary level that exists out in the field. In most areas, entry-level office salaries are placed on a par with unskilled labor at the bottom of the salary schedule.

Perhaps one of the best things that has come from the changes in the field of business because of legislation is the increased use of advisory committees. In those areas making extensive use of advisory committees, there has begun to be a change in entry-level salaries. The business community has had an opportunity to provide input into the content of business curriculums based on the needs of business and has become aware of the quality of the output of such programs. Students recommended from many of these programs have found themselves going out with considerably more attractive salaries. These are educated personnel directors and other members of the business community. Too few of these business people have had an opportunity to become enlightened through this process and operate without the benefit of such experience.

We must take our case to the business community, find out what they want, and see if they are willing to pay for getting this product. As long as we have masses of individuals having marginal skills competing with those having more refined skills but with little knowledge on the part of the business community as to the difference, we are going to continue to have low pay. If we can mount a national effort in the direction of identifying these differences and educating the business community while simultaneously being educated by them, we will have a product that has value in the employment marketplace.

Articulation, Including Career Education. There is a new actor on the education scene known as career education. Although this is considered by many to be a passing fad, there are many indications that it may be given increased emphasis over the next few years. There is a bill pending in the Congress which would make available some 250 million dollars in the name of career education. Business education is in a unique position to profit from this legislation. The director of career education in the U.S. Office of Education, Dr. Ken Hoyt, has said from the platform that business education has come closer to the concept of career education than has any other field of service. Even in our field, there are some significant gaps. We have done little to sell our program in the elementary and middle schools. We have done little to organize at the secondary level, and there is little evidence of well-articulated efforts at the junior and senior college levels that would avoid duplication. Business educators need to take a careful tock at the field to see what might be done at the elementary and middle school level to interest students in pursuing careers in the field of business. We need to assure that programs at the secondary level are developed in such a way as to assure the possibility of job placement upon completion of the secondary school; or, if the student so desires, entry into advanced education at a junior or senior college at a level which recognizes the previous education obtained.

We must get away from the idea that students are preparing for either entry into advanced education or preparing for a job. Business needs able young people with the potential for advancement. By proper attention by such groups as assembled here, it will be possible for us to meet the needs of students, the needs of the business community, and the needs of our country.

Summary. Perhaps the only way in chich we may get at the problem of semantics is to have a name change. Each of the terms "business education," "business and office education," and "distributive education" has some champions and some with built-in prejudices. Perhaps a new term such as "education for business" may have to be coined so we can develop a constituency aimed at identifying areas of commonality. With this approach we might get our act together so we can have an organized impact on future legislation. In order to get the act together, we are going to have to have an organized body of knowledge accepted by the total field. We must take into consideration the varying communities and must recognize that our appeal is going to be somewhat limited until such time as we develop the field to a level of sophistication that will allow our graduates to receive their just rewards for successful completion of organized programs of instruction. Finally, in order to insure upward mobility of our graduates, we must address the problem of articulation of the total field, perhaps using career education as the vehicle.

CHALLENGES FOR BUSINESS EDUCATION

by

Jeffrey R. Stewart, Jr.

The thoughts expressed here are not necessarily addressed to New York State. Rather, they represent concerns that are national in scope and which therefore apply to a greater or lesser extent in any one region or state. Nor are they intended to be comprehensive; rather, these challenges were selected from among many which seem to be important for the continuation of an effective business education program.

Challenge No. 1: Teach consumerism for a new standard of living.

The thrust of consumer education should be changed from buymanship to values clarification, product maintenance, and energy conservation. The term "consumer" should be dropped from course titles because it implies that materials and services are simply consumed and that there are always more waiting at the end of the plastic assembly line to be brought, used, and thrown away. Students need to consider lifestyle analysis, product value, product service, and maintenance much more than product choice, price, and characteristic. The mathematics of economics and economic choice are fundamental to these newer concerns. A major cooperative effort among business and distributive educators, home economics educators, and social studies educators should be launched to develop a required set of objectives to be achieved by all graduates. The major goal of such a course might be that the student will be able to assess his or her values, how financial decisions reflect these values, and the impact of these decisions on both the life of the individual and society at large. Students (and educators) need to develop for themselves new definitions of standard of living which include quality as well as, or perhaps instead of, quantity.

Challenge No. 2: Expand and improve adult business education.

Mandatory retirement practices are being challenged. It is very unlikely that such practices will survive the 1980's. More people are changing careers. More women are re-entering the labor market.

The age of the population is increasing, and high school enrollments are declining. Business offices are becoming more sophisticated and oriented to new technological developments.

Thus our attention must turn to where the action is--the adult market. If we don't, someone else will. Business educators, with the exception of proprietory school leaders, traditionally have done poorly in establishing adult programs, primarily because of a preoccupation with growing secondary programs. Teacher educators have ignored the unique competencies needed to work with adults. Legislators have seen fit to let much publicly funded adult education proceed either on a temporary/emergency basis or outside of the framework of public education agencies. Our offerings have been sporadic, uncoordinated, and poorly planned. A major priority for the 80's should be to plan and implement massive adult education programs that address both vocational and non-vocational purposes.

Challenge No. 3: Align curriculums with practice.

A difficult challenge, indeed, But we know what goes on in offices--why must it take so long to adjust the curriculum? Furthermore, hybrid programs must be developed for new kinds of jobs. The booming medical industry is an example of a challenge to business educators and health occupations educators to get together and establish joint programs. Other employment opportunities are increasing which call for our cooperation with agriculture programs, home economics programs, and various industrial programs.

A careful look at our own curriculums reveals a curious lack of relevance when compared with actual business practice and employment patterns. A great deal of progress has been made, but much more remains to be done as the rate of change accelerates. Electronics technology has accelerated during the past five years to the point that office machines as it was taught until 1972 is now obsolete. Data processing as it was taught until 1972 or 1973 (and even now, in many cases) is obsolete. Bookkeeping and accounting instruction have been serious offenders in not keeping up with current business practice and employment opportunities. We need ask ourselves how many of these trends or changes in business will be recognized in our curriculums:

1. The way many businesses keep records in a standardized format, requiring accuracy of input.
2. The growth of branch and franchise operations.
3. The redefinition of "manager" insofar as a branch or franchise operation is concerned.
4. Booming sales of text-editing equipment.
5. The growth of office employment opportunity in government agencies and large business. (Much of our curriculum still prepares the student for small office applications.)
6. The privacy act of 1974. (Its effect on records management instruction, for example.)
7. The substitution of telephone communication for much written communication.
8. Growth in sales of electronic calculators from one million in 1971 to 18 million in 1975.
9. Growth of reprographics services and changes in copying and duplicating methods. Emphasis on "copy preparation."
10. The nearly complete conversion to the ten-key keyboard for office computing machines.
11. The development of portable computers.

The list, of course, is nearly endless. The answer, I believe, to keeping up with the new office technology does not lie in purchasing lots of new equipment, though some would be nice. Nor will it be solved by issuing new state and local courses of study every year or so. I think the most important step in aligning curriculum with practice is to see to it that business teachers are frequently exposed to practice. They should read Modern Office Procedures and Datapro Reports, for example. They should study office systems and office technology in graduate classes. They should be encouraged to consult with business, coordinate cooperative programs, set up advisory committees, and seek industrial internships throughout their careers.

I detect a refreshing change in attitudes toward teaching among my graduate students (employed business teachers) who have pursued such activities. The teacher who, as a result of studying an office system at a dairy, can tell her students about a computerized dating service for cows (Yes, this really happened.) is bound to generate more interest in the classroom than the one who spends two hours teaching the binary system.

Challenge No. 4: Bring classroom practice up to the state of the art.

The typical knee-jerk response to this challenge is "do more research." My opinion is that a great deal of research has already been done in business education--most bad, some good. The problem is that the findings of the good research generally have not been put into practice. Therefore, rather than pour more and more money into research, let's divert some of these resources to a couple of related activities.

1. The identification of a body of research that is generally accepted as good, valid, usable, and relevant.
2. The establishment of classroom practices which are supported by the research.

This is obviously more than the typical "dissemination" of research. The findings of research cannot be absorbed by simply passing them over the body. A patient, understanding, knowledgable researcher needs to help the practitioner change his or her ways through example (teacher educators, take heed), demonstration, and salesmanship.

The practical answer? I don't know. Maybe large school divisions have research people who should turn their attention to this sort of thing. We teacher educators need to do a better job of setting the good example. Government agencies should stop funding research without better ways of applying it. We have good research on our shelves that will be usable to us for many years--let's use it!

Challenge No. 5: Develop special programs.

Challenge No. 2 was to expand and improve adult business education. This one is related to it in some ways. This challenge says, I suppose, to do what needs to be done when the need becomes evident. Make room in long-range plans for the unanticipated opportunity. Business education programs should be flexible enough to permit the inclusion of special short- or long-range educational programs for people who have unique problems.

Many special needs are evident right now, of course. People in correctional institutions need our help. Foreign language students need help. Many of our students, youth and adult, need special assistance in reading and mathematics skills.

The challenges are to identify the clientele, prepare the teachers, establish objectives and materials, operate in a cost-effective mode, bring as many individuals as possible back into the mainstream, and find satisfying employment for the students at the conclusion of the instructional program.

Challenge No. 6: State the minimum outcomes of each vocational business program.

We hesitate to set minimum standards in business education because of the fear that the minimums will become the maximums and that the standards may not change as office work changes. The challenge is somehow to be able to show a parent or prospective employer a list of things a person will be able to do upon completing a program in business education. If we don't set standards, every teacher goes his or her own way and there is no accountability. As a parent or employer, I would prefer to take a chance on standards being invalid than to take the greater risk of there being no standards at all.

The most reasonable way to determine standards for vocational business programs is to examine employment practices and job requirements. There is a great deal of research in business education that can be used for the establishment of objectives for our programs. Once the objectives are established, specific standards for meeting them can be set by states or localities.

Challenge No. 7: Take responsibility for finding jobs for business education graduates.

This challenge is for every high school and vocational school to establish a job placement service. Maybe you have already done this. Virginia schools are now required to do so, and guidance personnel are in charge. A further service that relates to this responsibility is to conduct frequent follow-up studies of graduates. They provide data both for program adjustments and the establishment of adult programs.

Business teachers should be involved in palcement services. Of course, cooperative office education coordinators and other business teachers have helped to find permanent employment for their graduates for years. An advantage to the student of the school taking a role in job placement is that recruitment talks prior to program entry tend to be more factual than before. Therefore, the same persons should be responsible for both recruitment and job placement.

Challenge No. 8: Help stamp out sex bias and sex-role stereotyping in office occupations.

This is not the typical plea to enroll more men in business education programs, even though that is a worthwhile goal. Rather, it is a plea to get employers to view their female office employees as women and not girls. It is a challenge to get our female students to think about becoming managers. It asks that we consider with our students the kinds of activities office workers should be expected to perform and the kinds they should not be expected to perform. Further, this challenge is for business teachers to consider with their students the rates of pay received by male and female employees in other occupations so that appropriate comparisons can be made with salary offers when they are made

The women's movement undoubtedly will have a major impact on business education in the 1980's. Many young women are already being "turned off" to office careers because of the "Girl Friday" image that often exists.

The problem of sex discrimination in office work will have to be attacked on many fronts, but we can do our part. We can openly discuss the problem in advisory committee meetings. We can recognize enlightened employers and refuse to place cooperative students with offending employers. Above all, we can look at our own attitudes, classroom practices, and instructional materials to see if any traces of bias remain.

I hope that the expression of these eight challenges does not discount the outstanding job that business educators have done in the past and are doing now. They largely reflect a concern that we make necessary changes in our programs and priorities as we move into the 1980's and beyond.

IN SEARCH OF NEW DIRECTION

by

Hobart H. Conover

For nearly two decades between the years of 1950 and 1970, business education in the secondary schools of this country remained relatively stable. This was not the result of program inertia but, rather, the result of minimal change in the way of accomplishing the work of business offices. Basic office machines instruction was introduced in the schools in approximately 1950, automatic business data processing in 1965, and content within existing courses was continually modified to reflect changing business practices and procedures. But the mainstreams of business education during that period continued essentially intact. As we know, since 1970 the tasks associated with office employment have changed dramatically. Furthermore, we are today only at the threshold of radically new office systems and working environments. This potential for unprecendented change has caused the staff of the Bureau of Business Education to seek this broadscale program reassessment. The Bureau staff looks to this Committee for guidelines that may serve as the basis for program content and direction for several years to come.

The Purposes of Business Education

Business educators throughout the country seem to be in total agreement that business education in the high schools should accomplish two primary purposes--teaching students for and about business. These two primary functions abound in the literature of business education and in the statement of purposes about to be released ty the Policies Commission for Business and Economic Educaton.

Business education designed for teaching students about business includes content for developing basic economic understandings, an appreciation of the American business enterprise system, consumer awareness and skill in the marketplace, and other personal-use knowledges and skills. Business education designed to prepare students for business seeks to develop the occupational competencies of recording, retrieving, coordinating, analyzing, organizing and reporting information essential to business decision making and to provide a body of business-related information considered essential to effective job performance. For a long time business education has also sought to provide students with career guidance and the interpersonal skills which are a part of occupational intelligence. It is only in recent years, however, that the importance of these latter two ingredients has been fully appreciated.

Business education has made a direct contribution to the total education of a substantial portion of the total student body of our secondary schools for a long, long time. Furthermore, the purposes of business education closely approximate many of the underlying purposes of all education. This is particularly evident as one examines the recommendations of the National Commission on the Reform of Secondary Education (The Kettering Report)* published in 1973. Only two of the thirteen goals identified in the Kettering proposal are not obvious components of any good business education program. The eleven closely related objectives are identified below.

1. Achievement of communication skills.
2. Achievement of computation skills.
3. Attainment of proficiency in critical and objective thinking.
4. Achievement of occupational competence.
5. Acceptance of the responsibility of citizenship.
6. Development of economic understanding
7. Knowledge of self.
8. Appreciation of others.
9. Ability to adjust to change.
10. Respect for law and authority.
11. Values clarification.

The Need for Broad Program Examination

Because business and office information systems are becoming increasingly complex and at the same time changing in terms of worker demands, it has come time to examine program content, design, and organization in its totality rather than with patchwork objectives in mind. The two purposes must once again be examined in terms of what might be considered achievable goals for the goals for the program in our secondary schools, adult education programs, two-year colleges, and above. This global reexamination must first address the question: "Are the job clusters for business education appropriate?" The United States Office of Education is presently engaged in the process of redefining program parameters for each of the occupational disciplines and their recommendations might be used as a first step in this endeavor. Thinking in terms of the program goal dealing with the teaching about business, the Committee must consider what might be the totality of this purpose in terms of our present society and its demands upon the individual.

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*National Commission on the Reform of Secondary Education, The Reform of Secondary Education--A Report to the Public and the Profession. McGraw-Hill Book Company, New York, New York, 1973.

The Committee must be prepared to project the principal sub-clusters which comprise business and office education and to analyze the job potential associated with each of the clusters. The Committee, in addition, should consider ways for providing future business education graduates the flexibility deemed desirable in what appears to be a very volatile future job market.

Changes occurring in the manner in which tasks are likely to be performed in business as well as changes in the demands for personal survival skills in tomorrow's society may dictate changes in emphasis within occupational and general business education course content. Should, for example, emphasis on keyboarding skills, machine transcription, basic language arts, and human relations skills be accelerated in light of the emerging office? Should shorthand instruction be de-emphasized? Should the inter-relationships between bookkeeping/accounting and electronic data processing be intensified? Should new content be introduced or eliminated?

Should business education confine its career preparation to the needs of the entry-level worker or point the way also to career advancement? For what jobs can secondary students be adequately prepared? For what steps on the various career ladders should preparation be provided primarily in the high school, two-year colleges, or four-year colleges?

Can or should there be some program overlap? Should short, intensive occupational courses be contemplated that will prepare adequately for several of the minimal-skill jobs?

The Complexity and Scope of the Committee Task

The complexity of the work of this Committee is very great! Many factors, some known and others based on conjecture, are certain to have a bearing on the eventual recommendations. Obviously, the Committee must be guided by what can be reasonably assumed to be the environment of business and home life in the years immediately ahead. It must contemplate both the job skills and personal knowledge and skills which business education might reasonably be expected to provide for future secondary students and adults. It should specify in broad terms curriculum content and design envisioned as most appropriate for the development of the essential competencies. Wherever possible, the Committee should also provide guidance as to the educational level that certain career competencies should be initiated either as introductory career experiences or as actual job preparation.

If certain basic competencies can be developed more economically or effectively in one setting than another, or if certain instructional methods are believed more appropriate than others for the development of the basic job and/or personal knowledge and skills, the Committee should feel free to suggest the preferred practice.

Equipment costs may cause schools to rely more heavily in the future on the school community for certain types of training or for the training to be relegated to community skill centers or area occupational schools. The resources of the total community must also be assessed in terms of possible alternate in- and out-of-school scheduling as the learning experience of students progress. Cooperative, part-time work experience and other community learning resources should be suggested if considered more appropriate for the development of certain job-related or personal survivor skills. The community library, museum, business establishments, and many other community institutions should be assessed for their educational potential.

The Business Student

For many years it has not been uncommon for many academically talented students to seek some business education in preparation for a personal-use purpose. Typically, however, business education enrollments in our high schools are drawn from students characterized as very average in achievement. In setting the objectives for the program this general student characteristic must be kept in mind.

In its deliberations, the Committee should not overlook the potential of business education for the academically talented, however, even in the form of accelerated or "compact" courses and/or programs. These courses and programs are popular in many of our secondary schools today and could become of even greater significance as parents and students see the need for job skills as part of their high school preparation. Introductory instruction in college level accounting, introduction to business ownership and management, and the advanced aspects of electronic data processing should be considered in terms of both career preparation and as try-out experiences.

Initial job preparation and updating or upgrading experiences for out of school youth and adults must also be considered when one contemplates the upheavals likely to result from future technological advances, business relocations and reorganizations.

A further committee consideration should be directed to the needs of special groups of individuals--the handicapped, minorities, students from homes where English is spoken only as a second language, and the educational disadvantaged. In what ways should business education be prepared to meet the needs peculiar to these students?

Formulation of the Committee Recommendations

The recommendations of this Committee may have a bearing on Bureau program plans for several years to come. The following general guidelines are suggested as ways for keeping the work of the Committee within reasonable bounds and manageable within the sessions that are contemplated:

1. No "sacred cows" should stand in the way of the Committee's recommendations.
2. Program recommendations should be conceived in broad terms and general parameters, trying to avoid specific content for program or other detail.

3. Recommendations should be considered as a framework on which future Bureau plans and activities might be structured.
4. Whenever possible, program recommendations pertaining to job preparation should be accompanied by employment projections, contemplated technological advances, social changes, or other phenomena that may have influenced the committee.
5. Effort should be made to confine recommendations to goals which are realistic within the total school structure and that do not infringe on the responsibilities of other disciplines.
6. The varying student bodies which business education serves and varying rates of learning should be taken into consideration in any program design.
7. Where possible, each recommendation should be accompanied by the rationale that prompted the conclusion.
8. A priority should be established for the implementation of the recommendations based upon the Committee's concept of urgency.
9. If a particular body of content or instructional strategy is recommended, or if a new strategy or body of knowledge is considered as having particular significance, ways for updating our present teaching staffs should be envisioned. This may be expecially important as one considers what is most likely to be a more stable job market for teachers in the years ahead.
10. Consideration should be given as to how the Committee might keep the field apprised of significant conclusions drawn as the work of the committee progresses.

The spacing of the meetings of the Committee should provide opportunities to weigh input during Committee deliberations against opinions that might be garnered from other business educators and to temper enthusiasms that may be generated from committee deliberations and guest presentations. It is especially important that the final recommendations be conceived in terms of what is likely to be achievable and also compatible with reality.

SUMMARY OF THE SECOND MEETING OF THE STATEWIDE BUSINESS EDUCATION REVIEW COMMITTEE MEETING

Phillip S. Atkinson

The tentative conclusions that form the basic outline of this report were developed by the committee at its June 10, 1977, meeting. The committee had previously met for two days in May to receive papers and discuss issues with nationally known leaders of education and business. The purposes of this meeting were largely organizational, and intended to set priorities for the committee. The recommendations established at that meeting and a summary of the rationale on which the recommendations were based is given below.

STUDENT POPULATION TO BE SERVED BY SECONDARY SCHOOL BUSINESS EDUCATION PROGRAMS

Tentative recommendations. (The underlined portions report the recommendations stated by the committee. Supporting rational statements have been added for this report.)

1 The secondary school business education program should continue to serve students who want a business occupation program. Students who leave high school before graduating need minimum skills for employment. There are other students for whom the high school becomes terminal education, at least for a few years. And there is some evidence that the number of students who are going directly from high school to college has decreased, leaving the possibility of the need of employable skills for use between secondary school, and college.

2 The secondary school business education program should continue to serve academic students who want an occupational skill. There is increasing evidence that the current college generation wants to be self-sufficient, wants or needs to work for tuition and/or spending money, and even needs to establish self-dependency to obtain state funds. There is also evidence that young people want and have what in other generations might have been called luxuries but which currently are deemed necessities, such as automobiltes and stereo sets, and need the skills to earn the money for such purchases.

3 The secondary school business education program should continue to serve all students who want personal use skills. Students should be provided with "survival"skills--handling funds, consumer awareness, and the ability to type one's own letters, reports, and term papers. Also, many students take courses for personal use but eventually use the skills vocationally, such as when applying for jobs in publishing or offering assistance to volunteer political or social organizations.

4 The secondary school business education program should continue to serve male as well as female students. Business education offerings should reflect the shift in our society in bringing about the end of male- or female-only positions, and the increased practice of movement of men and women from low-level entry jobs into middle- and top-management positions within firms. The greatest employment opportunities for the future are in replacements.

5 The secondary school business education program should continue to serve adult students. It is projected that education as a life-long pursuit will increase in the next decade. The high school should expect to share with post-secondary institutions in this endeavor to serve returning students, awarding credit for life experience, allocating credit by examination, and providing refresher courses in shorthand and typewriting and other subjects.

6 The secondary school business education program should serve students in other vocational areas who want business occupational skills. The coming generation of graduates is expected to continue the trend for independence that results in such activities as becoming proprietors of small businesses. The business education program should offer instruction in management, particularly for those in restaurant, auto mechanic, and other vocational programs who may want to manage their own businesses.

7 The business education program should serve students prior to the ninth grade. Enrollments in business education courses in the secondary school are expected to be increasingly dependent upon elective choice. The business education program should support the career education concept to reach students at a point where parents still influence their decisions. Promotion of typewriting as a language arts tool should continue.

PERSONAL USE SKILLS TO BE TAUGHT BY BUSINESS EDUCATION

Recommendations.

1 Personal use skills of first priority, but not in priority order, are problem solving/decision making; personal management of business affairs; wise use of the economic system; and career exploration and planning. Everyone needs to learn how to establish priorities, but in the decade ahead it is expected that young people will continue to make more and more choices on their own at a younger age. The business education program can meet the need of such students to learn to analyze and plan through consumer and economic courses as they continue to purchase large scale items at a younger age in a credit card age, such as vacations in Europe, stereo sets, and automobiles. These priority items deserve major attention in allocating limited resources for the development of business education programs in the coming decade. These items may be bypassed if special attention is not brought to bear. They may be integrated into many different business courses.

2 Personal use skills of second priority, not in priority order, are personal business skills and skills related to data processing, and law and the minor. These skills should provide graduates with an understanding of and integration into our economic system. These skills deserve second priority in terms of use of limited funds in the next decade.

(MAJOR) OCCUPATIONAL CLUSTERS AND SUBCLUSTERS (AREAS) TO BE SERVICED BY SECONDARY SCHOOL BUSINESS EDUCATION PROGRAMS.

Recommendations.

1 Accounting (bookkeeping). The secondary business education program should continue to offer accounting (bookkeeping). Initial positions that call for this experience are available in smaller firms and in smaller communities.

2 General clerical, including tellers and communication specialists. The secondary business education program should be prepared to meet increased demand for office workers with traditional skills and for new skills as demanded by the credit card age, facilities within banks for payment of bills, and the interlocking of telephones with banking and credit transactions.

3 Executive office assistant. The secondary business education program should be prepared to service the current word processing trend in business by preparing workers prepared to meet the decision-making, management, composition, and proofreading demands of such units.

October 12, 1977

APPENDIX A

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